The Health Reformer.

OUR PHYSICIAN, NATURE: OBEY AND LIVE.

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HOME AND FRIENDS.

Oh! there's a power to make each hour
As sweet as Heaven designed it;
Nor need we roam to bring it home,
Though few there be that find it.
We seek too high for things close by,
And lose what nature found us;
For life hath here no charms so dear
As home and friends around us!

We oft destroy the present joy
For future hopes, and praise them;
Whilst flowers as sweet bloom at our feet,
If we'd but stoop to raise them;
For things afar still sweetest are
When youth's bright spell hath bound us;
But soon we're taught the earth hath naught
Like home and friends around us.

The friends that speed in time of need,
When hope's last reed is shaken,
To show us still that, come what will,
We are not quite forsaken.
Though all were night, if but the light
From friendship's altar crowned us,
'Twould prove the bliss of earth was this—
Our home and friends around us!

The Teeth.

PROBABLY there has never been an age in which the people were so much troubled with decay of the teeth as they are at the present. It is seldom that we meet with those, even in early life, who have a full set of sound teeth. It is evident that there is a cause for this premature decay, which all should seek to ascertain, and, if possible, remove.

It has been said that early decay of the teeth is a sign that the individual will be short-lived. In one sense, this is true; for the same causes that induce early decay of the teeth, will occasion premature wearing out of all the vital organs. This cause is a lack of constitutional vigor.

Many years ago, it was recommended that people chew tobacco for the purpose of preserving their teeth; and there were many who adopted the plan; yet their teeth were not benefited in the least. While it is true that in many cases the teeth of the tobacco-chewer were not appreciably injured, it is also true that every tobacco-user gradually lessens his vital powers and soon becomes incapacitated to beget healthy offspring.

There are thousands of children and youth to be met at the presnt time whose teeth are half decayed. This is because they have inherited feeble constitutions from their parents. The parents expended so much of their vitality in expelling the narcotic poison of tobacco, and alcoholic drinks, and the poisons contained in tea and coffee, that they could not impart vigorous constitutions to their children.

There are many habits in which human beings indulge that have a pernicious effect on the teeth. The use of hot food and hot drink is very bad, also the use of ice-water and ice-cream. The use of drinks of any kind in connection with food is bad, for the reason that the food is rinsed down half masticated, so that the teeth do not have sufficient exercise to keep them healthy. It is well known that no organ of the body can become strong, or can retain strength, without exercise. The arm of the blacksmith becomes powerful by use, while that of the Hindoo devotee becomes powerless by inactivity. The same state of things results with the teeth. If they are used in masticating hard or solid food, they will be strong; but if they are not thus used, they will be weak, and will decay early and rapidly.

There is but one way to remedy the evil of having tender teeth; that is, to use them. Many persons whose teeth have been so tender and sore that they could hardly chew anything without pain, have overcome this difficulty by chewing their food thoroughly, using crusts of bread and graham crackers. Even those whose teeth were fast decaying have found that their teeth not only became firm and strong by the use of hard food, but also that the process of decay is retarded thereby, and that they are not troubled one-half as much with toothache as they previously were.

Every child should be instructed to cleanse his teeth after each meal. This habit, formed in early life, will generally be lasting. Every reader of the REFORMER who is not in the habit of cleans-

ing his teeth daily, should begin at once ; for when the teeth are not thus cleansed, there will be an accumulation of tartar upon them which will separate the gums therefrom, leaving the neck of the teeth exposed, and inducing disease in the gums as well as in the teeth.

For the purpose of cleansing the teeth, all that is required is a soft brush and soft water. If the teeth are very foul, a little powdered charcoal or castile soap will be found quite efficacious. No other dentifrice is required. M. G. K.

Alcoholic Medication.—No. 2.

BY RALPH E. HOYT.

THE use of alcohol for "medicinal purposes" is advocated and practiced largely on account of its supposed "strengthening" properties ; but it is also used, in acute and chronic ailments, to "drive away disease"—on the theory that disease is an entity, an independent existence, a something or other distinct from the human system, to be exorcised, driven away, or cast out, like the Magdalenean "devils" of old. But the truth is, the "benefits" derived from the use of alcohol are always simply imaginary, while the evils resulting therefrom are generally lost sight of by those who are at all disposed to believe in alcoholic efficacy. Let us examine, for a moment, the popular notion that alcoholic liquors impart strength to the human system. A person becomes debilitated by bad habits of life, and alcoholic stimulants are prescribed to "tone him up," and make him stronger. *Will* they make him stronger? They will *stimulate* him, of course, but as for increasing his strength one iota, they do not. No person was ever made a particle stronger by swallowing any kind or any quantity of alcoholic liquor. The trouble is that a majority of the doctors, and the people generally, mistake stimulation for strength. And herein consists one of the most pernicious errors pertaining to this whole matter. Stimulation is not strength, nor anything akin to strength. It is simply inflammation, and inflammation is but another name for disease. And this is precisely what one gets by taking alcohol into the stomach. Alcohol does not, cannot, "act on the system," or on any organ of it, as is generally supposed—nor can any other dead matter. The human system acts on the alcohol whenever the two are brought in contact with each other. Acts on it how? Not to assimilate it, or use it in any useful manner, for alcohol is of such a nature that it cannot be thus appropriated ; but acts in self-defense, with the view of its speedy expulsion. The presence of alcohol in the human system means war, commotion, disturbance, waste. The moment a particle of alcohol is introduced into the human organism, the vital organs recognize the presence of an enemy, and forthwith they commence the work of expulsion. This may be accomplished by one or all of several processes—through the lungs, kidneys, skin, &c. The system always rids itself of the nuisance in the speediest manner possible, but never without more or less loss of vitality. And this action of the system in expelling the enemy is what medical men for over three thousand years have called the "remedial action of alcohol on the human system," and the commotion, excitement, or stimulation involved in the struggle is called strength.

There *are* certain articles and processes which really strengthen the human body—such as food, air, exercise, rest, sleep, light, and water. These are nature's "tonics," and they are needful for every human being, whether sick or well, with due regard to quantity, &c. The invalid requires these things, in proper apportionments, as it is from them that he derives what little strength he may possess. When he recovers his health, does his physician say that now he is well he will need no more food, air, water, light, rest, sleep, or exercise? By no means. On the contrary, the quantity of these strengthening elements is *increased*, as the patient grows better, and all common sense, as well as physiological law, approves such a course. Now, on the theory that alcohol is strengthening and beneficial to a sick person, what legitimately follows? Place alcohol on the same footing with food, air, rest, sleep, &c., and you assume that it is as necessary to keep a man well as to cure him when ill. Hence, when an invalid who is treated alcoholically recovers from his illness, instead of ceasing to use that which "supports vitality," he should continue its use, uninterruptedly, and even more freely than while sick. If alcohol strengthened him yesterday, it will do so to-day, and if it strengthens him to-day, it will do so to-morrow, and so on, through every succeeding day of his life, if he will only use it regularly and freely. There is no escaping this deduction, and if the theory from whence it emanates be true, alcohol ought to be used daily, by every human being, just as they would use or take food, sleep, air, water, exercise, or rest. This notion that alcohol imparts strength to those who use it, is one of the most absurd and pernicious fallacies of the age. And it does seem as though any person of average intelligence who will examine the matter carefully and reason upon it candidly, must so decide.

I am aware that the advocates of Alcoholic Medication point to numerous instances where sick persons use liquors, and recover. This fact, they claim, proves conclusively that alcohol is a good thing, at least for sick people. But really it proves nothing of the kind. Sick persons—especially those of "strong constitutions"—may do and take a great many bad things and still recover their usual degree of health ; but it by no means follows that the bad things cure them, or that their vital organs are uninjured by such

agencies. On the other hand, what inference should be drawn from the fact that countless thousands of people die every week, if not every day, under alcoholic treatment? Is there no room for just the faintest suspicion that alcohol may help them out of the world? Or is death in every such instance simply a "mysterious dispensation of Providence," independent of natural law?

Whether an article is good or bad can best be determined by learning the real nature of that article, and its relations to the human organism. If it be found a poison, a foe to life, and a destroyer of health, the only rational conclusions to be drawn are that its inevitable tendency is to make well persons unwell and sick persons sicker; and that when a person uses it in disease and recovers, he gets well *in spite* of the "medicine" and not because it did him any good. Scientific experiments and investigations have repeatedly demonstrated that alcohol—whether swallowed ostensibly as a "medicine" or as a beverage—cannot be assimilated, nor used in any manner for the benefit of the system or any organ thereof. It is alcohol when swallowed, it never becomes anything else while in the system, and it is thrown off entirely unchanged. It has no "action" whatever, but is simply acted against by the various organs of the body, and expelled, sooner or later, without having done a particle of good, but more or less harm in the shape of wear and tear of the vital machinery. Alcohol is neither respirable, oxidizable, digestible, nor in any manner usable in the organic economy. The body can make out of it neither bone, sinew, muscle, flesh, nor blood. It is a product of putrefaction; all processes of distillation involve decay and death, and alcohol, which is thus obtained, is the intoxicating element in all kinds of drinks capable of producing intoxication.

The principal difference between whisky and beer is in the percentage of alcohol which they contain. Experiments made by Pereira, Fontana, and other eminent chemists and physiologists of Europe and America, show that the effect of alcohol on plants, leeches, frogs, dogs, and larger animals, is to *kill* them; and that its effects on the human system are, to use the exact language of Pereira, "those of a powerful caustic and irritant poison." These important facts have been demonstrated over and over again, and certified to by the most eminent chemists and physiologists in the world; and yet, by some strange infatuation, a majority of the medical profession and the masses of the non-professional people, still cling to the idea that alcohol, in some way or another (not one of them can explain *how*), "acts on the system," and is promotive of health and strength. It is gratifying to know, however, that many medical men of learning and eminence have discovered the fallacy of this idea, and have boldly declared their disbelief in Alcoholic Medication. I propose to give a few quotations from such medical men, bearing upon this subject, but will defer them till next month.

Chicago, Illinois.

Lack of Knowledge.—No. 9.

BY J. N. LOUGHBOROUGH.

In my last, I made some remarks on the relations of mind and body, and introduced some illustrations, showing how the mind can affect the body, even death being produced as the result of an evil imagination. It is not only true that the condition of the mind affects the condition of the body, but it is quite as true that the powers of the mind and the feelings are depressed by disease of the body and a low state of the nervous system. Many invalids—conscientious souls—suffer indescribable agonies of mind with the idea that they have committed some unpardonable sin, and lost the favor of God, because they feel bad. When, did they know it, all these bad feelings are occasioned by bad health. Did all invalids understand this, and know how much of bad feelings to attribute to a low state of nervous energy, depressing atmosphere, wrong social surroundings, etc., much agony of mind might be entirely dispensed with. If we are conscious of having done wrong, we need not suffer. Turn away from the wrong. God is merciful; with him we may find peace. If we know of no wrong to separate us from our God, why go in gloom and sadness? God has lavished upon us the blessings of this life, which ought to teach us his kind and fatherly care over all his works, especially for all who trust in him.

Some eight years since, being in a low state of health as the result of overlabor and unhygienic habits, I spent some three months at a health institute. While I was there, I learned of the case of a Presbyterian deacon, a conscientious, devoted man, who was there receiving treatment. He came to the institution with the idea in his mind that he had committed some unpardonable sin; yet he could not tell *how*, *when*, nor *where*. He was a terrible dyspeptic, emaciated in body, with a low state of nervous energy. The physicians placed him upon a plain yet nourishing diet, with cheerful and pleasant surroundings, and kind and obliging waiters, giving him such local treatment as would induce the healthful flow of the blood to the stomach and liver, and relieve indigestion. As the result, he soon began to rest well nights, and his nervous system began to strengthen with the increase of bodily energy. In the course of three weeks, the gloom began to leave his countenance; and at the end of six weeks, an occasional smile would be seen on his face. Soon, in his morning walks, he was overheard humming and whistling some familiar air. At the end of about three months of his stay there, one morning he

was taking a walk, singing at the top of his voice, blithe and happy as the birds of the wood around him. The head physician overtook him in his walk and called out, "Bro. ———, what makes you sing so?" "Well," said he, "I don't know. Some how *I feel* just like singing all the time." "Well, brother," said the physician, "Where are those despairing feelings you had, and the unpardonable sin you had committed, when you came here?" "Well, I don't know," replied the deacon, "I have tried a week to call up those feelings, and I can't. They are all gone, they won't come." Yes, the return of health had driven sadness and despair away from his heart. He returned to his home a cheerful, happy man. Not that he had been spiritually converted at the institute, for he was regarded, by those who knew him, as a devoted man before he came. He had, however, obtained a physical renovation, with which came health and cheerfulness; and his despair left, as a matter of course.

The reason why the mind and the body are each affected by the condition of the other, is because of the close sympathetic connection between the brain proper, the organ of mind, and all other parts of the system; or between the nerves of animal and organic life. These two systems of nerves have each their appropriate sphere and work. The nerves of organic life preside over the building up of the system, and are directly connected with all the organs of the body. The grand center of this system of nerves is the solar plexus, which lies directly back of the stomach. As the stomach is the grand central organ of supplies to the body, so this system of nerves, which control the life processes of the human organism, has its center near the central organ of supplies. The stomach is largely supplied with nerves from the solar plexus, and it is also associated by networks of nerves with all the surrounding organs. It sympathizes more directly and powerfully with every other internal organ than does any other organ; and, again, every other internal organ, and every part of the living body, sympathizes more directly and powerfully with the stomach than with any other organ. So the condition of the stomach is directly affected by the condition of the nerves of organic life, and *vice versa*.

There is the closest connection between the nerves of animal and organic life. In health, the animal nerves, of which the brain proper is the center, have no direct control of the functions of the nerves of organic life; yet there is such a sympathetic connection between them, that any violation of the healthy action of either affects the other. Excitement of the mind, or violent passion, affects the whole domain of organic life. Such excitements and irritations, frequently repeated, lead to change of structure in the organs, and hence to disease. While the nerves of organic life are preserved in a healthy state, the mind is cheerful, as in healthy childhood; but when these nerves are deranged in their action, "we are unhappy, we know not why. We long for relief, we know not from what. We would go, but we know not where. We would cease to be what we are, yet we know not what we would be." We look around for the cause of our grief, but in vain. If this feeling is long indulged in, despondency, like the pall of death, envelops us in its myriad folds.

He who understands the effect of the mind upon the body, and of the body upon the mind, should proceed at once to make a practical application of this knowledge in all the ways and walks of life. All rising and indulgence of passion must be avoided, as also that feeling akin to it, a spirit of fault-finding with all around us. "No fretting and scolding here," should, in heart, be the motto of every dwelling, if not suspended in writing upon the walls. Don't let us think everybody is at enmity with us, and find fault and seek a particular quarrel with each of them; but let us realize that all have rights by creation as well as ourselves. And while we do what we can to make our fellows happy, let us rejoice in their prosperity. Let us indulge no feeling of envy, strife, murmuring, nor complaining, but under all circumstances be thankful. And if it even be ours to meet trials, as we must in this world, instead of sorrowing and repining, let us ever think how much worse our case might be than it is.

Just as I was writing the above lines, my eye caught the following article, and I will insert it:—

"Restless Discontent.—Doctors are often called to prescribe for anomalous complaints whose leading characteristics are furred tongue, want of appetite, disturbed sleep, constipation, feeling heavy in the morning, moroseness, stuffy temper, restlessness and general unhappiness. This state provokes excessive consumption of tobacco and spirits in men; and in women, crossness to children and servants, and a dislike to seeing company.

"These symptoms follow persistent abuses of the system. The remedy lies not in medicine, but in reformation. Let the patient ask himself about his eating, drinking, smoking, and other indulgences. Let him consider, one by one, every drain upon his system. Then let him try a little less loading of the stomach, less strong chiccory coffee, less tobacco, less drainage of every kind upon his nervous system. So sure as daylight follows darkness, there will come renovation of health and spirits without medicine.

"There would come a great change in social life if we had moral doctors in the land. The excesses that poison our tempers, absorb us with frivolities and make trouble in social life, would be kept in bounds if every one had some fixed moral object to divert the mind from physical excesses, and from chronic ill-humor, which they always engender and transmit to offspring."

How Shall we Treat the Sick?

THE following extracts from a letter may, perhaps, illustrate the experience of a few others besides the writer; hence, we publish them with comments:—

"PUBS. HEALTH REFORMER—*Dear Friends:* I have now been a subscriber to your journal for several years, and am a firm believer in all you teach, and have tried to live, and raise my children, in accordance with its teachings, in most respects. A few weeks ago, my little boy and only son, seventeen months old, was taken with diarrhea. I treated him according to Dr. Trall's Encyclopedia, which work I have, and had such confidence in the mode of treatment that I felt certain of his recovery, till the expiration of the third day, when his appetite failed entirely, and the fever seemed to increase, which I could not check, only while bathing. I then gave him, during one night, according to directions of a celebrated anti-dysenteric cordial, which had cured, or seemed to cure, many persons that we knew of; but, in this case, it produced no effect. Next morning I thought I could see death in his face, and we called in our family physician to take the case, this being the first time any of our family ever submitted to "drugopathy." He treated him that day and the next night, when death put an end to his sufferings just at daybreak, just five days from the time he was taken sick. I suppose you will say the drugs killed him; but I don't think so; not that I have any faith in drugs, for I feel sure he would have died any how.

"He was taken shortly after dinner time with, apparently, an ordinary diarrhea; bowels moved four or five times that afternoon, and four times the first night, and after that, I think they averaged once every hour until his death. There was one day and night he passed a great deal of blood, I think the second; but after that, the stools became more natural. What he first passed seemed to scald the skin, as it were. He did not have very much fever till the third day. Lay in his crib, and seemed drowsy all the time, and did not seem to have any pain, as he never murmured or complained during his sickness. Did not vomit at all, gagged once or twice on the fourth day. We commenced giving him injections the morning after he was taken. I don't think we gave him over three per day. Was that too many? He was weaned, ate unleavened graham bread, principally, with rice, fruit, and vegetables, seasoned with a little salt and milk. Yours Truly, ———."

In commenting upon this letter, we would say, first, that we feel the deepest sympathy for this afflicted mother, and would not say one word to wound her already bleeding heart; yet, as she has asked us to speak on this subject, we will do so, not only for her sake, but for the sake of others who may be placed in similar circumstances.

This child was taken with the ordinary form of dysentery, and for the first twenty-four hours was in no danger.

The plan of treatment this mother, and all others under similar circumstances, should have adopted, is this: As soon as the child showed symptoms of bowel complaint, an examination should have been made of its bowels; and if they were found to be swollen, or hot, or hard, it should have been understood that the child needed a full enema to cleanse its bowels and remove obstructions. This enema should have been administered immediately, at a temperature of 90° or 95°, and after the bowels had moved freely, a gill of cool water should have been administered as an enema, and retained. Immediately after the enema, a hot fomentation should have been applied to its abdomen for fifteen or twenty minutes, as hot as the child could bear. This should have been immediately followed by a cool compress, which should have been wrung out of water at 65°, and cooled as often as it got warm, until the heat of the child's body was what it should have been. In the meantime, the entire body of the child should have been bathed once a day with tepid water at 85° or 90°. If there was fever, it should have been bathed two or three times a day, or should have been placed in a tepid pack for a few moments two or three times a day, as long as the fever lasted. Instead of this, nothing was done for this child during the first eighteen hours. This was the first error. The giving of the cordial was the second error, and placing the child in the hands of a drug doctor was the third, and, in this case, the fatal, mistake. It is seldom that children die, if let alone, and not compelled to take drugs. The writer has never yet witnessed, nor been personally acquainted with, such a case; yet he has seen very many sick infants, and oh! how many of them have had their lives destroyed by the use of drugs.

Infants are rapid in all their actions, and in all their vital functions. Look at a little child as it walks. How rapidly it steps! No adult could step as rapidly for a half hour as can a child for hours. So with the circulation. The pulse of an adult, in health, is about seventy-two beats per minute; while that of a small infant is nearly double that number.

When an infant's system becomes clogged, and there is a remedial effort set up to unclog the system, and to remove impurities therefrom, the actions will all be rapid, the same as in health; and the child will appear very low. The parents become affrighted, and, in their anxiety to save the child, they do for it the very things they ought not to do. Parents, when your children are sick, do not become frightened because they suddenly appear so very ill. It is their nature to change rapidly, and the same law applies in their recovery as in disease. I have seen children, who one

day were at play, and apparently well, yet were, the day before, to all appearances, on the threshold of the grave. Parents, when your children are so sick that you do not know how to treat them with water, do not give them poisons because you do not know what else to do for them.

In the case under consideration, when the mother found that the child was getting no better, she should have calmly reasoned the matter in her own mind, and should have considered the true relation of poisons to the human system. Had she done this, she would not have suffered her child to receive poisons.

I wish it were possible to make the people understand that those things which, if taken into the system in health, will occasion sickness, cannot, by any means, occasion health if taken into the system by the sick, except in cases of poisoning, when the poison, yet in the alimentary canal, may be neutralized by the use of other poisons, and in cases of cancers and other morbid growths, which may be removed by caustics. How can it be possible that substances which, as is acknowledged by all, cannot in the least degree contribute to the maintenance of health, nor to the support of vitality, and which, as is also admitted, are inimical to both, can restore the sick to health? It is not so; the proposition is preposterous. All the healing power that can possibly be brought to bear on a human being is the healing power that is inherent in his own system. And all that any physician or nurse can possibly do that will benefit the sick, is to supply such conditions as will make it possible for the inherent vital, or healing, powers of the patient to manifest healthy action, and this can never be done by introducing poisons into the system, for, in so doing, instead of inducing healthy action, we occasion a new diseased action, to expel the poison.

The following statement was made by Professor W. Carson, M. D., of the New York College of Physicians and Surgeons, before the medical class of that college: "It is easy to destroy the life of an infant. This you will find when you enter practice. You will find that a slight scratch of the pen, which dictates a little too much of a remedy, *will snuff out the infant's life;* and when you next visit your patient, you will find that the child which you left cheerful a few hours previous, is *stiff and cold.*"

Professor Gilman, M. D., of the same school, said, "The application of opium to the true skin of an infant is very likely to *produce death;*" and "a single drop of laudanum will often *destroy the life of an infant.*"

Thousands of infants are yearly slaughtered by the use of opium in its various preparations, such as morphine, laudanum, paregoric, soothing sirups, and cordials. Parents, if you love your children, give them none of these things.

M. G. K.

Life Insurance and Hygiene.

THE managers of life-insurance companies are shrewd business men, always working for the interest of the company they represent. In early times, when there was less competition in the business than now, they sought to enlarge their dividends by high premium rates; but as competition has lowered the rates of premium, the older companies find that there will be a corresponding diminution in the dividends to be declared among the stockholders, unless some means can be devised to prolong the lives of the insured. While looking about for the desired means, they have made a discovery which, if acted upon, will be of incalculable benefit to the human family. The discovery is that the surest way to promote the health and longevity of the people is to disseminate among them a knowledge of the fundamental principles of hygiene. The following is from the *Evening Post:*—

"Some of the life-insurance companies, it is said, have made the discovery that sanitary science has a similar relation to their business that the prevention of fires has to that of insurance against loss by fire. That a company taking a risk on lives has a direct interest in making lives as long as possible, is certainly as obvious a reflection as that those insuring against fire or against marine risks should provide, as far as lies in their power, against the destruction of buildings and ships. The task of the former, moreover, is all the easier, inasmuch as they have only to aid in the diffusion of a knowledge of the laws of health, while the latter are compelled to large outlays of money as preventive measures.

"The fact being recognized that a great many people die when they might, just as well as not, live, simply because they are ignorant, and not because they prefer dying to living, it is proposed to substitute publications for gratuitous distribution, devoted to hygiene, for the wretched little periodicals, without either literary or scientific merit, which are now used as a means of advertising by life-insurance companies.

"The average duration of human life, according to the tables of the British life-insurance companies, has increased nearly one-third within the last century and a half; and the experience of the best companies in this country, for the last thirty years, bears similar testimony. It is not that men are born stronger; but that with the increase of knowledge has come increased changes of living, as the causes of death and the laws of health are better understood. The diffusion of this knowledge becomes, therefore, a subject of direct pecuniary interest to life-insurance companies, and they can do much in the aid of science and the welfare of society if they shall make their little tracts the vehicles of sound advice and information, rather than collections of scraps of ill-di-

gested and useless literature. A man, moreover, will be much more likely to insure his life when he is wisely counseled as to the best method of keeping alive. If he felt no interest in the subject before, or supposed he had no option in the matter, he may be taught to believe that it is worth while to give it serious consideration."

The foregoing extract gives an indication of the policy to be hereafter adopted by these companies, and we shall look for floods of tracts and pamphlets devoted to "Hygiene and Life Insurance."

The Benefits of Health Reform.

[THE following is the testimony of Mr. N. P. Trist of Virginia, a veteran health reformer, in reference to the benefits which he has experienced in consequence of having adopted the hygienic method of living. The writer is now upwards of seventy-three years of age; and judging from his photograph which he sends us, his prospect for life is still much better than that of scores of much younger men. He seems also to possess a commendable degree of the real missionary spirit, and seeks to acquaint others with the glorious truths to which he is himself so much indebted. The first portion of it recently appeared in the *Science of Health*, and has been sent to us for publication with considerable in addition. We give it in his own words, although somewhat doubtful about the propriety of drinking so freely of even the most pure water as Mr. T. has done.]

This day completes my seventy-third year; perfectly well *all over*. No ailment, or indication of ailment anywhere, from crown of head to soles of feet. Just two years ago, *pemphigus* (one of the most "*refractory*" of "refractory" skin diseases, and indicative of "*low* condition;" condition so very low as most peremptorily to demand "*generous* living," so called by the doctors; *i. e.*, for example, "*porter-house steak*," washed down with "*brown stout*," tipped off with a glass or two of "*good sound old sherry*," etc., etc.) This disease, I say, had, two years ago, complete possession of all four of my extremities; both feet, soles and ankles, and legs half way up to knees; and both hands and wrists, and arms up to elbows. At the same time, my predecessor in Mexico (singular coincidence, especially considering the rareness of this disease), the wealthy John Slidell, was in Paris or thereabouts, suffering in the same way. *No* doubt, "the faculty" (not only of Paris, etc., etc., but of London also) did its very best for him; and *probably* medical skill with its noble ally, pharmacy, were backed by "generous living," to the utmost of its ability. Some months ago, he died at Brighton—so New Orleans report had it—a miserable death. Here am I, with skin as smooth as satin, able to walk miles with elastic step, on the *strength* of my "eccentricity" as to diet; to wit, *Grahamism* of the very strictest kind; "sawdust" bread so called, in contradistinction to "family flour" yeast bread, such as *rational* people eat; said sawdust being eked out in its nutritive properties by vegetables and fruits. Instead of brown stout, sherry, etc., etc., pure water —water made as pure as boiling and double filtering could make it, the second filtering followed by dripping through the air. This water drunk "*to excess*," to such extreme excess as full half a gallon before breakfast, between 5 and 7 A. M. by way of "appetizer" and "blood purifier"—in the first of which two capacities, it "beats all hollow" those little birds Lord Byron told of in connection with the Scotchman, who, having heard of their appetizing properties, ate a dozen of them, and found his appetite not a bit the keener for it, for those two quarts (four honest pints) of Adam's ale prove always *quant. suff.* to make my graham sawdust quite as welcome to my stomach (first of all, however, to my *palate* on its way downwards), as ever sirloin of "baked missionary" was to those of a Feejee "flesh-eater." Besides this water, a little milk now and then with my fruit. No other fluid of any kind; no stimulant of *any* sort, either fluid or solid; not even salt. Coffee and tea, of course, eschewed.

Such is the material out of which my tissues have been able to build themselves up anew, in the course of my seventy-second and seventy-third years. And this, too, after the tissues, as the penalty for my *backsliding* from pure Grahamism (to which I had been indebted for my first perfect conception of what is meant by *health*) down into ordinary, orthodox, "rational" way of eating and drinking "like other people," had got into the alarmingly depraved state, to all seeming an utterly hopeless one for a man of my age, indicated by that *pemphigus*. Nor was it the only manifestation and proof of the low condition into which my system had fallen. The blisters, in endless succession, with which, for several months previous to August, 1871, it had kept my extremities covered, so that neither foot could be put to the floor except at the point of the heels only, had been preceded by about two years of torment from terrific attacks of facial neuralgia, alternating with "layings up" by rheumatism, whilst my muscles were being honeycombed by seemingly endless crops of boils and carbuncles which reached to nearly one hundred and fifty in number before that process of purification ceased. Add spongy and bleeding gums, the neuralgia having made the use of toothbrush impossible, and an idea will be formed of the forlorn condition in which, two years ago, I presented myself at one of our health institutes, there to enter once more upon the same dietetic regimen, which, upwards of twenty years before, had been adopted by myself and family, upon conviction based upon thorough examination into the subject; and to which, at that period,

and for a long series of years afterwards—as long as faithfully adhered to—I had been indebted for uninterrupted and unvarying health, month in and month out, year in and year out, without even so much as an uncomfortable feeling of any kind for a single day, or single hour, or minute. *Such* health, in fine, such powers, both of exertion and endurance, I possessed, as never before in my life had I realized to be possible for me. To this condition—this very same condition, allowing for the difference of years, have I been brought back by a recurrence to the same means to which I was originally indebted for an introduction to it—for my *first* acquaintance (about my fiftieth year) with the true and exact meaning of the word HEALTH.

S. R. Wells, in publishing my note to him, to which this addition is made, gave to it for caption, the words, "HYGIENIC LIVING." Had my *whole living* in these two years been truly *hygienic,* the effect would most indubitably have been far more noteworthy. In truth, however, the transformation is due, almost, if not quite exclusively, to diet alone; to the nature and quality of the substances supplied to my blood-manufactory to make its product out of. In all other respects, especially in that one particular which is known, to every body who knows anything on the subject, to be the most fundamentally essential of all—observance of the law of periodicity—my living has been the reverse of hygienic. The force of circumstances, in the last two years, as well as in all previous years of my life, has been allowed to make me irregular in all my hours; even as to eating. But very seldom have my two meals a day been taken within an hour of the time set for them.

I mention two meals, because, on our arrival at the health institution, in August, '71, this novelty of two meals a day—then still a novelty for us, though practiced already in thousands of families, and for many years past—was adopted by my wife and myself as one of the rules of the establishment. Persevered in ever since, and adopted by way of trial by others of our family, it has proved so highly advantageous to all that not one of us would be willing to return to the old way in this respect. The setting of our table for a third meal is now become a thought no less foreign to the minds of our domestics than that of rising at midnight to roast a pig is to the mind of a devout Jew. No eating ever in our family—unless it be by the domestics—except at the two meals; except when we have a visitor who has not become sufficiently civilized out of the barbarism of three or more meals. Nor is there any coffee or tea making for our table, save on such exceptional occasions of the stranger within our gates. And then the rite of hospitality extends no further than to lay it before him or her, without partaking.

Alexandria, Va., July 2, 1873.

Rheumatism.

BY J. A. TENNEY, M. D.

ACUTE rheumatism has two forms, inflammatory and articular, which are essentially different as regards indications of treatment, but are jumbled together in medical books, the same treatment being given for one as for the other. This makes little practical difference, however, as drug practice in this disease is based upon vague suppositions instead of correct theories, and is by no means uniform. Some hold that the causes of the disease are alkaline in their nature, and therefore require the administration of acids; while others believe the disease to be caused by a superabundance of acids in the blood, and consequently, alkalies are indicated. Thus the blood is managed (!) as though it were a chemical compound, instead of a vital fluid.

Medical professors agree in one thing in relation to the disease: they admit that their treatment is nothing more than blind experimentation, and hence is constantly changing and unsatisfactory in its results. The true physician does nothing when he does not understand the nature of a disease; at least, he does not experiment with such remedies (?) as "bleeding, general and local, mercurialization, colchicum, nitrate of potassa, an ounce or more given daily, opium in large doses, quinia, and the use of the veratrum viride" (I quote from a standard authority in theory and practice), in a blind search for the conditions which constitute the disease.

The predisposing causes of rheumatism are imperfect digestion and deficient excretion. The liver, in particular, fails to perform its office of eliminating impurities from the blood. These obstructions cause inflammatory action when the system is excited by overwork, undue exposure to cold, etc., which inflammation is an effort on the part of the system to expel the accumulated poisons.

In inflammatory rheumatism, the vital effort is directed toward the surface of the body. The symptoms are a florid appearance of the surface, with heat and tenderness, strong pulse, and swelling, heat and pain in the joints.

In treating inflammatory rheumatism, make use of cold applications to the whole surface of the body. If the patient can be moved, the wet-sheet pack should be given as often as may be necessary. If the surface is very hot, the packs should be cold and of short duration. Cold, wet cloths should be kept on the joints, so as to preserve the normal temperature as nearly as possible. The bowels should be kept free with daily injections of warm water.

The diet should be very simple, consisting of wheat-meal gruel, baked apples, boiled rice, or something equally harmless, until the patient has progressed far toward recovery.

In the articular form of the disease, the condition of the system is opposite to that existing in the inflammatory variety ; *i. e.*, the vital effort is directed *from* the surface, which is indicated by a frequent, but not strong, pulse, chilliness, occasional sweating, and stiffness of the joints without severe pain except when trying to bend them.

Hot full-baths should be given to promote normal circulation in the skin. When the joints are so stiff as to cause great pain when the patient is handled, the application of electricity to the painful joints, for a few minutes previous to administering the bath, is of great service. It may also be occasionally used to advantage instead of the full-bath, or in connection with it.

The directions given for the preceding form of this disease, as regards diet, etc., apply with equal force to this variety. In either case, it should be very simple and abstemious as long as the violence of the fever exists.

Acute rheumatism is not a dangerous disease. And from the large number of cases that I have seen treated hygienically, none ever being followed by heart disease, or resulting in crippling the patient, and at the same time often observing cases under drug treatment where such consequences did follow, I have come to believe that, in such cases, these *grave* difficulties are the result of maltreatment.

N. E. Hygeian Home, Concord, Vt.

A Cheap Filter.

Those who reside where soft spring or well water cannot be obtained, should, if possible, procure a filter, and filter rain water for drinking and cooking purposes. If they cannot obtain one, they can very readily make one in this manner :—

Take a large flower pot or any other earthen vessel having a hole in the bottom (the larger the vessel the better). Fill the bottom with large, round pebbles. Cover these with smaller pebbles, then with coarse sand or fine gravel, and then cover all with four or five inches of pounded charcoal. The charcoal may be placed in a bag and broken with a hammer or mallet. It should be sifted, the finest dust being thrown away. A clean, flannel cloth should be spread over the charcoal, being held in place with clean stones. When thus prepared, the filter should be set over a suitable vessel into which the water can be allowed to drip. Water poured on the filter will be strained through the woolen cloth, thereby losing many of its impurities ; then, as it passes through the charcoal, it loses whatever organic impurities it contains. If a suitable earthen vessel is not obtainable, a sound oak tub, keg, or bucket can be made to answer every purpose by boring a hole in the bottom and filling with sand and charcoal as already described. Every family should have a filter. M. G. K.

Mortality in Cities.

Last year the mortality was precisely equal in New Orleans and Boston, being 30 per 1,000 inhabitants in both. The mortality in Halifax, Nova Scotia, was 31 per 1,000. Savannah, with its hot climate, though built upon a low-lying coast, and surrounded by pestilential swamps and rice fields, is as favorable to life as Florence, more favorable than Montreal, and very far more favorable than Prague, or even, strange as it may sound, than Munich. The mortality in Savannah and Florence was 36 per 1,000 ; in Munich it was as high as 41 per 1,000. Again, the rate in New York and in Berlin was exactly equal, and in both it was disgracefully high from the same cause—absence of the most elementary sanitary precautions. While in London, the most populous city in the world, and certainly not the best managed, the mortality was no more than 21 per 1,000, in Berlin and New York it reached 32 per 1,000. Yet New York, lying in the temperate zone, girt by water, and washed by the fresh sea, ought to be far more healthy than low-lying London, on the sluggish Thames.

After-Dinner Naps.—Sleeping after dinner is a bad practice, and ten minutes before dinner is worth more than an hour after. It rests and refreshes, and prepares the system for vigorous digestion. If sleep be taken after dinner, it should be in the sitting posture, as the horizontal position is unfavorable to healthful digestion. Let those who need rest and sleep during the day, take it before dinner instead of after, and they will soon find that they will feel better, and that the digestion will be improved thereby.

Some days ago, a needy person applied to a wealthy citizen for help, and received the sum of five cents. The giver remarked, as he handed out the pittance :—

"Take it ; you are welcome ; my ears are always open to the calls of the distressed."

"That may be," remarked the recipient, "but never before have I seen so small openings for such large ears."

Newspaper mistakes are scarcely avoidable. Every issue of many journals involves the placing of 150,000 type. Out of that number, some will be wrongly placed, in spite of the best of care. A Pittsburgh paper made a rather ridiculous blunder lately, and yet there was only one letter out of place. The editor said "The Legislature pasted (passed) the bill over the Governor's head."

Ralph E. Hoyt, the humorous lecturer, says nearly everybody in Colorado is engaged in mining. Some men mine gold, others mine silver, and occasionally a man can be found who minds his own business.

To Correspondents.

MILK AND CREAM.—B. F. K. writes to inquire wherein lies the impropriety of using pure, sweet cream in making pastry and graham bread.

Ans. Cream is composed largely of oil globules. A little cream is not very objectionable; but if much is used, the food is made less digestible, because in cooking, the oil globules are ruptured, and the oily matter covers the fine particles of the food and prevents the gastric juice from coming in contact with them, and as a consequence, the food is not so easily digested.

The same correspondent also asks, If milk is adapted to the young, what objection can there be in using a pure article of milk in bread-making?

Ans. There are three objections to the use of milk. 1. It is difficult to obtain healthy milk; that is, milk which is free from what microscopists call diseased germs. 2. Liquid foods of all kinds are unsuited to most adults. 3. All milk must necessarily contain more or less saline and other excrementitious matters from the animal supplying it. When sweet milk is used in place of water for the purpose of making unfermented bread, no serious result will follow; but the practice of using sour milk and buttermilk with soda or saleratus is very objectionable.

He also inquires what he shall do for his mother, who is seventy-five years of age, and who has sore eyes.

Ans. Your mother needs constitutional treatment. Try to get all parts of the system into healthy action by the use of proper food and properly adjusted clothing, and by an occasional tepid bath. The eyes should receive a fomentation, followed by cool application of water, once or twice a week. It is quite difficult for aged people whose vital organs are much impaired to adopt any system by which they may insure perfect health. Yet they may better their conditions by a careful observance of the laws of health.

DYSPEPSIA.—A subscriber inquires: 1. "What can be done to get the chloroform out of one's system?" She says she has three times taken three or four ounces at a time. 2. "My stomach is so weak that nothing will stay on it, and my heart is somewhat affected. I am growing worse daily, do not sleep half the night, and feel languid and feverish all day. What shall I do to regain health?"

Ans. 1. Chloroform does not remain in the system for any great length of time, but it occasions an effect if taken in large quantities from which it is difficult to recover. All you have to do is to let chloroform alone.

2. Your difficulty is nervous dyspepsia. Your friends are right in advising you to go to a health institute. You should go at once, for home treatment will be of little use in your case.

RHEUMATISM.—Mrs. M. G. writes: 1. I got my feet wet and have taken cold. For more than a week, I have been stiff all over. My right arm and my limbs from my knees down are numb, and ache and swell at the ankles, and I am not regular now although I have been regular in the past. What shall I do?

Ans. Your disease is a species of rheumatism with a tendency to dropsy. You should go to the Health Institute; but if you cannot, you will find that a sweating bath will help you. You can take this once a week for two or three weeks as follows: Take a common wash-tub (if you have no bath-tub), raise one side three or four inches, and put into it four or five gallons of hot water. Place a large tin pan or other suitable vessel in front of the tub, containing sufficient hot water to cover the feet and ankles. Wet the head in cold water, then sit down in the tub and place the feet in the foot bath, then have an attendant cover you with a blanket in such a manner that no steam can escape, and so that the air cannot get access to any part of the body or limbs (the head should be left uncovered). After sitting in the tub five minutes, add hot water to both baths until they are as hot as can be borne. Keep the water thus hot until profuse perspiration takes place, unless faintness occur, in which case leave the bath. A glass of hot water drunk after sitting in the tub for eight or ten minutes, will hasten the sweating. Before leaving the bath, the water should be cooled by adding cold water to both vessels. After remaining in them for four or five minutes longer, pour a few quarts of cool water over the entire body, and wipe dry. Then rub the body well with the dry hand. Take this bath once a week for two or three weeks, but do not take it when unwell. In the meantime, take a dripping-sheet bath once a week, but not on the same day as the other. Do not expose yourself nor transgress the laws of health.

The crooked legs of your child that you speak of is caused by the bones being deficient in earthy matter. You must not allow him to walk or stand on his feet much for the present, and he will probably outgrow it. Bathe them frequently with cool water. Rub them daily, and feed him principally on oatmeal gruel and porridge. Oatmeal is excellent for producing strong bone and muscle tissue.

ULCERATED URETHRA.—Mrs. G. R. writes: My daughter, nearly eight years old, has been troubled with inflammation of the neck of the bladder, and has great pain before and after passing water. This trouble began about the first of last March. She has been treated by a drug doctor ever since. What shall I do for her?

Ans. Give her no more drugs, but, instead, a hot fomentation three times a week over the region of the bladder and inflamed part. Let the hot cloth remain on for five or eight minutes, then

apply a cold, wet cloth for three minutes. Alternate thus for twenty minutes. On alternate days, administer a tepid sitz-bath for ten minutes. Give the child a good hygienic diet.

SCROFULOUS HUMOR.—O. E. K. writes that he has a humor which began to appear, eighteen months ago, in the form of white, dry scabs. He took drugs, and it became much worse. He then took various drugs at the hands of different physicians, then took vapor and sulphur baths, and the humor has finally about disappeared. He has weak eyes which maturate in the night. He says he eats no pork except as it is cooked in other food for seasoning.

Ans. Yours is a case of scrofulous humor, caused by weakness and torpidity of the liver. You should not seek to dry up the humor, for if you do, it will be likely to appear in some vital organ and cost you your life. You should discard the use of all fat meats, all grease and butter, and all kinds of food that contain shortening. You must not use sugar nor milk, except as the milk is cooked with other food. Neither should you use preserves or rich sauces. Lean pork would be less injurious to you or to any one else than the above-mentioned articles, and this also should be entirely discarded. You should take some form of a tepid bath three times a week. It does not matter much how you take it. Sleep in a well-ventilated room, and spend most of your time in out-of-door exercise. Make hot and cold applications to the eyes once a day, and wear the wet-girdle around the body, covering the region of the liver. Wear this three or four nights in succession each week. Bathe the parts with a cold, wet cloth in the morning.

MANDRAKE.—M. A. M. asks if podophyllum peltatum (May apple or mandrake) will cure liver disease, and if it is a drug, or is injurious to the system.

Ans. The fruit of mandrake is wholesome; but the leaves and roots are poisonous. They will not cure liver disease, neither will they cure any other disease, for all the curative or healing powers belong to the living tissues of the diseased individual. Mandrake is not as injurious as some other poisons, yet it should never be taken.

GENERAL DEBILITY.—Mrs. S. S. D: Yours is a case of general nervous prostration. Home treatment will do you but little good. If you cannot come to the Institute, all that you can do will be to live strictly in accordance with the laws of health, and take a sponge-bath or tepid hip-bath, once or twice a week; also a dripping-sheet bath once a week. Send to the Office of the HEALTH REFORMER and get the pamphlet entitled, Good Health (See Book List), and follow its teachings.

OLD ULCER.—B. T. J. asks what to do to heal up an old ulcer on the limb, which has existed for two years, and which six physicians have treated without success. It is very painful all of the time. The ulcer is not deep, but is very red, and at times looks like canker.

Ans. This case requires constitutional treatment. The patient must put herself on a plain diet, which must be strictly vegetarian. She should take a warm sitz-bath or a full-bath, twice a week, and should for a few days wear a cold, wet cloth over the ulcer. This cloth should be changed as often as it becomes warm. After four or five days, remove the cold, wet cloth and apply a little burnt alum or powdered bloodroot if there is a white or cankered surface, or if there is proud flesh. Then apply a cloth saturated with olive oil (sweet oil), and keep it saturated continually. It will probably heal after a few days. If it does not, a surgeon should examine it. If the bone is not decaying, it can be readily healed by transplanting healthy skin from some other part of the body. This is done by pinching up small bits of the healthy skin, from the arm or elsewhere, and cutting it off with sharp scissors, and then placing it on the red, granulated surface of the ulcer, where it will soon become attached. After a few days, other portions can be applied; and thus, by degrees, the ulcerated surface can be lessened until it is healed.

NEAR-SIGHTEDNESS.—Mrs. S. J. M. asks: 1. what to do for a child twelve years old that is very near-sighted; 2. Are Dr. Ball's eye cups good for this difficulty?

Ans. 1. Your child's eyes are too round. All you can do for them is to have the child close his eyes, and press against them gently, yet firmly. In this way, you may, after a time, flatten them somewhat, when his sight will be improved. 2. Dr. Ball's eye cups are useful in far-sightedness, as they draw the eye out, and make it more convex; but in your child's case, they would do harm.

The same correspondent asks if it will do to wean her babe, which is but nine months old.

Ans. Yes; if you can provide such food as is recommended in the article entitled, "Diet for Infants," in the September number of the REFORMER.

She also gives particulars concerning her own case. She is thirty-three years old, has seven children, has always worked hard, and for the first twenty-five years of her life used pork, tea, coffee, etc. She is over-worked and is prematurely old. What she needs is rest. She can do but little at home treatment, but by following the teachings in "Good Health" (see Book List), she can regain a measure of health.

CANKERED MOUTH.—Mrs. N. C. W. asks, What shall my daughter do for a cankered mouth?

Ans. She must live strictly hygienically, bathe twice a week, and wear the wet-girdle over her liver. The cankered spots may be touched with borax.

DR. TRALL'S Special Department.

Another College Term.

MANY of the readers of the HEALTH REFORMER are aware that for several years we have been threatening to suspend the Hygeio-Therapeutic College for one or more terms, in order to complete our large work, "Principles of Hygienic Medication," and several other works we have long had in hand. Last year, in answer to the applications of students, we urged them to attend the then ensuing term, because it seemed morally certain that the "suspension" would occur immediately thereafter. But the time for a change of programme has not yet come, and the college term of 1873–4 must be calculated on. What will happen thereafter we will not predict, as we have already acquired sufficient reputation as a false prophet. We will say, however, that, as we are expecting a larger class next winter than we have ever had before, and are making arrangements for a thorough course in all departments, we earnestly invite all who intend to become practitioners or teachers of the hygienic system, or to acquire a thorough health education, to attend the ensuing term, in view of the possibilities of the future. It has been our hope that we could retire from the college faculty for one or two terms and have the college continue without interruption; and for this hope's sake, we have postponed our long contemplated literary work from year to year; and this is the only answer, excuse, apology, or explanation we can offer to the complaints of those who have subscribed and paid for our large work, and have so long and so impatiently waited for it.

Let patience have its perfect work. The book *may* never be published. We are subject to the order of nature, the accidents of life, and the ways of Providence. We can only work while it is called to-day. The night of earthly existence may come, with much unfinished work in hand. But those only who are familiar with the onerous duties, constant care, and unceasing watchfulness consequent on a house full of invalids who are to be instructed, managed, and cured, often against their own tendencies and propensities, to say nothing of ignorance or miseducation, can appreciate the incompatibility between such a vocation and close, hard, original thinking and writing. For the first time, however, we have arrangements nearly completed which will enable the hospital department of Hygeian Home, and possibly the college department, to go on and afford us all the leisure necessary for literary work. And in the hope that this arrangement will soon be completed in all its details, we shall continue the business as heretofore, directly or indirectly, until the close of next college term.

The Perihelion Again.

WE are not sure that the prediction, which we never made, respecting the pestilence that might be occasioned by the conjoint perihelion of the large planets, will not be the death of us. We feel able and willing to contend against the blunders, misconceptions, and misrepresentations of individuals "in the form," for then we know the ground on which they stand, as well as our own. But when our opponents appear in the shape of spirits, only recognizable through certain obsessed media in peculiar conditions, we feel that we are at a vast disadvantage, and when the controlling intelligence claims to be just five hundred and eighty times as old as we are, and moreover to have been born outside of the dimensions of the little solar system which we have always been obliged to inhabit, the disadvantage is awfully aggravated. The reader may, therefore, imagine our sense of demolition, when, rapidly running over the pages of a pile of newspapers, our amazed eyes encountered the following portentous paragraph:—

"PHYSICAL MANIFESTATIONS IN KANSAS.

"The editor of the *Observer*, Pleasanton, Kansas, has attended a *seance* at the celebrated "Round House," on the farm of Mr. Morrison. He gives a full account of the manifestations he experienced. The circle consisted of four gentlemen and three ladies. One spirit gave his age as thirty-four thousand years; said he was n't born on any planet in our solar system; the people on his planet were far ahead of the inhabitants of this world in knowledge of science and art, and in everything pertaining to life; they had no religion, did not believe in the existence of a God, and had no fear of death. The ancient invisible was asked if Dr. Trall was right in his dismal prediction of famine and pestilence resulting from the conjunction of several planets, and he replied, No."

We are almost constrained to forgive the *Tribune* its squibbing, the *Graphic* its ditto, and a hundred other papers their echoing of these two. Their knowledge is limited to the solar system, and they are not even as old as we are. But when a thirty-four-thousand-year-old, who was born beyond the regions of Neptune, and possibly the dog-star, Sirius, if not legions of miles more distant, speaks through four gentlemen and three ladies, he must be presumed to know something. We do not dispute his scientific attainments. We do not controvert any communication he may have occasion to make to mortals or through mortals of the solar sphere. But we respectfully submit a question: If the old fellow knows enough to know that our "dismal prediction of famine and pestilence" is not "right," why does he not know enough to know that we have never made any such prediction?

Disease Germs.

MICROSCOPICAL investigations are continually disclosing the data which will ultimately demonstrate beyond all cavil or controversy the truth of the theory that disease is essentially abnormal vital action, as has always been taught in the Hygeio-Therapeutic College, frequently explained and illustrated in the HEALTH REFORMER, and proved every day in the year at the hygienic health institutions. No one has prosecuted microscopical examinations more assiduously or more successfully than Dr. Lionel S. Beale, of London; and it seems very strange to us that he does not see to what result his researches are tending. It has been ascertained that, in the decay of organic matters, myriads of living organisms of infinitesimal dimensions are produced, and that these may penetrate the structures and pervade the blood of human beings, and become the germs of disease. On the other hand, it is admitted that they exist in the human system and pass through it without occasioning sickness of any kind. Whether they do or do not become causes or germs of disease depends entirely on the fact of their accumulation to a large extent, and this accumulation depends on the condition and habits of the person. The more unhygienic his living, the more gross will be his blood, the more obstructed his capillaries, and the more liable to inflammations, fevers, or chronic diseases resulting from accumulated disease germs.

The immensity of these germs numerically may be imagined when Dr. Beale calculates that millions of them could inhabit a single red corpuscle of the blood. As the white corpuscles are the vitalized element of the blood, when disease germs are present in sufficient numbers, these corpuscles of course act or "differentiate" abnormally (remedial effort), producing imperfect tissues and structures, and obstructing the vessels. The process is analogous to that of a cancer or other morbid growth on the surface or in the large glands, which is nothing more nor less than abnormal structural development. The *Eclectic Medical Journal*, for July, 1873, states the theory of Beale very clearly:

"One of the immediate consequences of the abnormal increase of life plasm is the clogging of the capillaries. These vessels are choked with unwieldy bioplasts, and hence stagnation and, ultimately, inflammatory exudations ensue. The engorged vessels obtain relief in these exudations, hence, swelling and pain, due to fullness and pressure; hence, heat, due to excessive formation of bioplasm. The heat is simply the new, altered manifestation of the previous force which held together the compound molecules of the pabulum. In fevers, the capillary stasis, instead of being local, is general. Fever may be the result of general sanguineous depravation, such as would result from too much alimentation and too little exercise, bad food, bad water, protracted fatigue, exhausting the nervous system and debilitating the secrement emunctories; or it may result from what is called contagion or infection. As before stated, the more recent view of the morbid principle of contagion is that it is a kind of degenerated bioplasm. It is living matter which has descended from bioplasm that should have gone to form muscle, nerve, or red globules, but which has lost its original properties and acquired a low kind of reproductive activity; a tendency to produce generation after generation of bioplasts like itself, but successively degenerating; these may live and flourish under conditions where normal bioplasm would perish, and when introduced into other organisms than those where they originated, may readily overcome the *vis protectrix naturæ*, and multiply themselves at the expense of the pabulum, bioplasm, or formed material, which they there find. This is, in brief, the theory becoming so prevalent in this country and in Great Britain, and German naturalists are regarding it with favor."

It is certainly strange that medical men cannot see a better method of managing these morbid bioplasts than trying to destroy them with poisonous drugs—mercury, alcohol, quinine, etc. These agents, being inimical to everything that possesses vitality, are as destructive to the white corpuscles and normal constituents of the blood as to the abnormal growths and morbid constituents. It is curing the disease by killing the patient, and is therein consistent with the whole plan of drug medication. As hygienic living will prevent all of these evils, so will hygienic agencies remedy all the remediable diseases and morbid conditions resulting from them. The simple fact that water-dressings are recommended by eminent living surgeons (and have been by eminent surgeons in all ages) as the very best and all-sufficient remedies for all local inflammations, ought to set the drugging doctors to thinking in the right direction.

Typhoid Fever and Tophet.

PHYSICIANS have always been as much puzzled to locate typhoid fever as theologians have to find the locality of the "bad place." Some have sought the latter in the center of the earth, others, in the blazing sun or some other burning planet, and yet others, in outer darkness, "beyond the bounds of time and space." Suffice it to say, they have not found it. Some medical theorists have located typhoid fever in the membranes of the brain, others, in the stomach and bowels, others, in the blood, others, in the nerves. But they have not found its location, and never will. The reason is, it has no location. It is an action of the whole organism, not a thing in a particular place.

The *London Lancet* affords an amusing example of the pursuit of what does not exist. It says:

"The history of an attack of typhoid fever is somewhat obscure. The poison lurks in the body

some time before the real onset of fever; it may be as long as five or six weeks. The disease then begins insidiously and irregularly; the prodromata are uncertain. Where does this poison work? Is it in the intestinal tissue, or in the mucous membranes, or in the absorbent system? We do not know; we say that it is in the blood. Where are these lurking beginnings? These are probably in the intestinal system, for we find digestive disorders and disturbance of the bowels in the first instance. It is, however, very difficult to say when the disease begins; but if the ordinary course of health be represented by a straight line, we shall find at the commencement of the disease an abrupt deviation from this straight line, which deviation goes on increasing till the fourth to the sixth day; consequently, we find that on the fourth day the patient is ill, and on the fifth or sixth day very ill and obliged to keep his bed. It is about this time that we first see these patients, as a rule, and how are we to tell that they have fever? Well, by the little instrument called the thermometer. Now, if on the first day the temperature be normal, in the afternoon, there is no fever. In typhoid, the temperature increases 1.5° to 2.0°, or even 2.5° F. in the first twenty-four hours. If a person who has been exposed to typhoid fever have a headache, and his temperature be 101.5° on the first day, it may be typhoid; but if, as is sometimes the case in persons who have been nursing, the temperature be below normal, or even if it be normal, you may be certain that there is not fever present. On the other hand, if on the first day the temperature be 105° you may be certain that the disease is not typhoid. We see, therefore, that whether the temperature be too low or too high, the thermometer will greatly assist us in making a diagnosis. The temperature goes on rising about 1.5° per diem till about the fifth or sixth day, when it reaches its maximum of about 103.5° or 104.0°, or even more. This is not absolutely true, because some persons may go through typhoid fever and know nothing at all about it. In this disease, therefore, we see that there is first a long and uncertain prodromal stage, and then the onset of fever, which is insidious. Although the degree of temperature is reliable in determining the presence or absence of fever, the same cannot be said of the condition of the pulse, for, in nervous patients, the rapidity of the pulse may be greatly increased, and yet no fever be present. It therefore becomes an important thing to use the thermometer in practice; it will save many errors if used at the proper hour of the day—that is, in the afternoon."

This thermometrical diagnosis is all nonsense. The patient may have typhoid fever and the thermometrical heat of the surface be above or below 98° to 105°, or sometimes below 98° and sometimes above 105°. How an "attack" of the disease can be obscure, we cannot understand. Being an action and not an entity, its existence is manifested by its symptoms. When these are not present, the disease has no existence. As usual, the *Lancet* confounds the cause of the disease—"poison lurking in the blood"—with the fever itself. But when it talks of the disease attacking the patient, and the patient going through the fever without knowing it, we are confounded utterly. But medical writings are redolent of such twaddle, from alpha to omega.

Milk for Vegetarians.

SOME folks have very strange notions of a vegetarian dietary. Some persons seem to think that it consists in abjuring pork; others that it means eating "bran bread;" and many there are who suppose that vegetarians, if they discard flesh, fish, and fowl, have no objections to milk, butter, cheese, eggs, and oysters. The marvelous developments of "constructive" chemistry threaten to supersede the cow altogether, so far as butter and milk are concerned. In a late number of *Nature* we are informed that an ingenious and learned French chemist (M. Dubounfant) makes an excellent and satisfactory artificial milk by combining olive oil or some other fatty substance with due proportions of sugar, dried white of egg, subcarbonate of soda, and water, and it adds: "By substituting vegetable albumen for the white of egg or gelatine, the vegetarian may prepare for himself a milk that will satisfy his uttermost aspirations."

We do not know what business a vegetarian has with aspirations, uttermost or otherwise, in the direction of milk—except that of the cocoa. One might as well talk of a carnivora having an aspiration for cabbage as a vegetarian aspiring after cows' milk or the factitious substitute. All real vegetarians are weaned when the teeth are developed.

Women versus Men Physicians.

NOTWITHSTANDING the greater disadvantages under which women are obliged to pursue a medical education under difficulties, it is a demonstrable fact that women physicians of all schools, as a general rule, are more successful than men physicians financially, to say nothing of their superior success in treating their patients. We could give a score of cases in illustration, but will occupy space but for a single one. We have a letter from Mrs. R. Swain, M. D., of Indianapolis, Indiana, who graduated at the Hygeio-Therapeutic College two years ago, in which she says: "My first year's practice was worth $1,200, my second, $1,800, and my present practice is at the rate of $2,000 a year, independent of all doubtful accounts, and steadily increasing. I have sixty-seven families represented on my note book. During the two years I have practiced here, I have lost only two patients:

one, an old man of seventy, of catarrh in the bladder; and the other, of consumption."

It is due to Mrs. Dr. Swain to state that the communication was entirely private, and that the above were stated incidentally, with no thought of publication. But trusting her good heart to pardon the liberty we have taken, we put them on record for the encouragement of others.

The Theory of Fermentation.

BY R. T. TRALL, M. D.

PERSONALLY, I have no motive for nor interest in any further controversy with "J. H. K." on the sugar question. But as our articles thus far, without further explanation, must inevitably leave the readers of the HEALTH REFORMER in a worse muddlement than they found them, it seems to be due to them as well as to the disputants that the matters in issue be a little further ventilated.

So far as our discussion has any practical bearing, it is all disposed of in the first and last paragraphs of "J. H. K.'s" ten columns. He commenced with a promise to correct the "extreme grounds" and the "reckless and unscientific statements" of hygienists. These statements were just two. 1. Sugar is not properly food. 2. Sugar is not wholesome as an article of diet. And he comes to just two conclusions. 1. Sugar is not wholesome to eat. 2. Sugar is only necessary for perverted appetences.

These are strange conclusions from the premises, and utterly irreconcilable with the arguments. But as they are just and true, I ought perhaps to be satisfied, and submit uncomplainingly to his criticisms, which seek to involve me in divers inconsistencies. But it may be profitable for doctrine and for reproof to criticise the critic in a moderate way.

I have yet to learn that it is necessary to pander to morbid appetites. One might as well say that brandy is necessary to render water palatable to a drunkard, or stealing necessary to render property enjoyable by a thief. When "J. H. K." undertakes to teach science, he has only to show what is true or false, not what persons believe or disbelieve, like or dislike.

I utterly disclaim all responsibility for "J. H. K.'s" notes. It is no uncommon thing for my students to charge me with saying things which I never taught nor believed, and sustain their positions by quotations from their notes. Two things may happen in reporting lectures. The speaker may be mistaken, or the reporter may not put his ideas in the proper language. So far as the notes of "J. H. K." are concerned, I am willing to admit either position. The blunder or ignorance may have been mine or his. Neither has anything to do with our discussion, which relates only to the nature of fermentation and sugar. I simply deny the correctness of his notes; and were I disposed to cavil, I might go further and deny that "J. H. K." ever attended my lectures. Those initials do not represent any one of my students. But it may be asked, What is the difference whether *somebody* who attended college writes over his own or a fictitious signature? I answer, It is important, not only as a matter of taste and propriety, but for other good and substantial reasons which could be named, that all persons who assume to write scientific articles for the public, and especially those who profess to correct the errors of authors who claim to be scientific, should give their names to their productions. This is universal custom, and I hope the responsible editor of the journal (I am informed that the nominal editor is absent) will insist on this practice hereafter. I shall not have any further discussion with any anonymous writer, nor should I have meddled in this matter had I not been requested by our intelligent and worthy "Truth-Seeker."

When the "Hydropathic Encyclopedia" was written, more than twenty years ago, I had not investigated the nature of fermentation, and accepted the opinions then taught by the best authorities. I freely give "J. H. K." the credit of discovering some of the errors of that work. They are, however, of no practical importance, and have nothing to do with any question between us. But since he finds it so much easier to find an error or inconsistency in my early writings than to meet the positions I hold now, I take pleasure in informing him that there are more errors in the "Encyclopedia" than he has discovered, and some which no person except myself will be apt to discover, and that I shall expose and correct them all in the larger work I am preparing. Indeed, I should be ashamed of myself if I had not learned something in a quarter of a century; and I frankly confess that I now know many things that I did not know many years ago.

But, as to fermentation, what is it? This has long been one of the most perplexing problems of the scientific world, and is now being investigated by scientists with as much interest as is "protoplasm" or "evolution." The relation of sugar to fermentation is lucidly stated in Youmans' Chemistry, to which I referred the reader in my answer to "Truth-Seeker." But here "J. H. K." makes a disingenuous "departure" by saying that Youmans regards sugar as an organic *substance*. What the point here is, unless a dodge, I am unable to see.

In conclusion, I submit the following from the Philadelphia *Ledger* as the best exposition of fermentation that I have seen:—

"WHAT 'FERMENTATION' MEANS.

"There are but few things more common, and at the same time less subject to popular thought, than the process of 'fermentation.' It is before the housekeeper nearly every day, doing her work

as a good servant, when 'raising' her bread, after the application of a small quantity of 'yeast,' and doing mischief to her preserves when it sets them to 'working.' It is also the potent agent in the brewery and the distillery, turning the juice of barley into beer, the juice of the grape into wine, and the juices of rye, corn, wheat, molasses, &c., into liquors, more or less useful or mischievous accordingly as they are applied to good or bad purposes.

"The smallest particle of 'yeast' will set immense quantities of fermentable substances to 'working,' and this 'working' is simply the growth of the yeast which spreads and multiplies with marvelous rapidity. Although the process of fermentation has been subject to study for a long time, it is only of late years that it has been brought to the test of close scientific observation; but even yet the scientists are undetermined whether the active agency in 'yeast' is vegetable or animal, vitality or mere *motion*, though some of them profess to have come to the conclusion that the vital principle in 'yeast' is identical with the original germ of all animal life.

"The 'yeast,' or fermentation process, is wonderfully curious. Take any sweet liquid, the juices of the fruits and stems of various plants, the water in which malted barley has been steeped, and if it is left exposed to the air in a heated room, or in warm weather, it undergoes marvelous changes. No matter how clear the liquor was, or how free from impurities, it becomes cloudy or muddy, bubbles rise, and sometimes there is a delicate hissing sound, the same as that from soda water or effervescing wine. There is then a scum on the top and 'settlings' at the bottom. After a while this action stops, the scum also settles, and the liquid becomes finally as clear as it was at first. But in the meantime the liquid has undergone a total revolution as to its qualities. It *was* simply sweetened water, the drinking of which would produce no visible effects; but *now* it has acquired the taste and smell and the properties of spirituous liquors, the drinking of which produces immediate effects on the nervous system, which vary from exhilaration to intoxication, stupefaction, and even the destruction of life.

"These are truly wonderful changes; and what is the agent or principle or substance that brings them about? Here the scientists differ upon several points, but all agree upon one, which is that *motion* is somehow caused in the elementary substances which compose the liquid—that they become separated from each other and are re-organized in other combinations different from the original form. But what causes the 'motion' when the liquid is standing undisturbed? The 'motion' is first observed in the form of floating globules. These soon become so numerous as to make the liquid look cloudy, although no one of them is larger than the two-thousandth part of an inch. They are in ceaseless activity. They multiply with great rapidity, each one of them having the faculty of giving off still more minute 'buds,' and these grow rapidly and give off others, and so on to infinity.

"All this has been closely observed and made reasonably certain by some of the greatest chemists of France, Germany, and England. It was then observed that each of these self-propagating globules *is a living organism*. It is a mere 'sac' or cell, containing a semi-fluid matter, the minutest organism endowed with life. It is supposed to be identical with the ultimate germ of all animal and vegetable life. It was thought by one chemist to be an animal organism; others speak of it as 'vegeto-animal,' or a combination of vegetable and animal, and still others of higher authority speak of it as the 'yeast-plant;' and Professor Huxley says it is a true plant. Yet none of them explain what starts these organisms into such active life. There is a hint that they spring spontaneously into living existence, but all the analogies contradict this assumption. Indeed it has been fairly demonstrated that a simple solution of sugar and water will not 'ferment' if it be perfectly secured against the introduction of the 'yeast-plant,' or cells, which usually float about in the air. 'Fermentation' requires the presence of at least *one* of these 'globules,' or 'yeast-plants,' to be present before that process begins; and this one will soon germinate millions, and so make bread 'rise,' or turn grape juice or malt or grain into wine or beer or whisky."

A Word on the Other Side.

ALTHOUGH it is most certainly not desirable to prolong this discussion unnecessarily, a few words further on my part seem to be demanded in order that justice may be done all parties, and that the readers of the REFORMER may rightly understand the positions which have been taken. To this end, attention is called to the following points:—

1. In writing the articles on Sugar which have appeared in the recent numbers of the REFORMER, I made no personal allusion whatever, and meditated no attack upon any one who lays any claim to scientific authorship, or at least who could support such a claim.

2. The object in writing was to first disarm objectors of their prejudice against radicalism and extreme views, by disowning those views upon this question which have been, heretofore, and still remain, unsupported by logical and consistent argument, and then to advance such arguments against the use of sugar as were of so practical and convincing a nature as to compel all candid people to admit their force and pertinence. This being my object, I of course arrived at the conclusion stated by Dr. T.

3. I did not set out with the intention of disputing or discussing either of the statements claimed by Dr. T.; viz.; "1. Sugar is not properly food;" "2. Sugar is not wholesome as an article of diet." On the contrary, I continually guarded the reader against the use of sugar, and stated that a person would live no longer when eating only sugar than if he ate nothing at all.

4. The statement which I did controvert, and characterized as "reckless and unscientific," was that sugar was an inorganic substance, like sand, salt, etc. This position I still hold, my arguments (now recognized as such) still remaining unanswered, notwithstanding they have been subjected to misrepresentation and ridicule.

5. Again, the nature of sugar, as being organic or inorganic, is the ground upon which Dr. T. took issue with me last month, thereby recognizing the fact that that was the point of difference between us.

6. This being the case, I am uncandidly treated when represented as arriving at conclusions exactly in harmony with the positions controverted.

7. The statements which I made in my explanation, last month, as I there intimated, were not for the purpose of involving Dr. T. in any difficulty or inconsistency; this was merely incidental. My purpose was to show that I had reasons for believing that in making the statements I had made in my first article I was not attacking Dr. T. in the least, and, hence, was not guilty of characterizing his statements as "reckless and unscientific."

8. Although I am granted full credit for having discovered some errors in the Hydropathic Encyclopedia, the correctness of my notes is denied. While the *possibility* of their authenticity is slyly intimated, the evident design is to convey the idea that they are entirely unreliable. Admitting the truth of all that is said regarding the liability to error, I am still tenacious of the truth and correctness of the notes referred to, having been especially careful to insure accuracy on this point. In corroboration of the statements there made, I can, and will, if called upon to do so, cite the names and testimony of a half dozen responsible persons, fellow-students, whose notes I find in perfect agreement with my own. Let me here say that I do not wish to be understood as insinuating any lack of sincerity on the part of my much esteemed preceptor, but fear that his usually excellent memory has proved somewhat treacherous in the present instance.

9. I am accused of making a "disingenuous 'departure'" when stating that Youmans regards sugar as an *organic* substance. The reason why this statement was made was to correct the impression which had been conveyed that he considered it *inorganic*.

10. So far as fermentation is concerned, no new light has been advanced that I am able to discover, notwithstanding the lengthy extract from the *Ledger*. The conclusion of the matter seems to be that fermentation is a process induced or excited by the growth of the yeast plant, and is entirely dependent upon the presence of certain organic germs or spores, introduced from the air or otherwise. It is readily seen, then, that albuminous substances cannot be said to ferment any more than saccharine substances, the action being precisely the same in the case of each. Where, then, is the consistency in admitting that albuminous substances will ferment, while denying that the same is true of sugar? But I do not wish to recapitulate. All these points were noticed last month, and they are only confirmed by the *Ledger* extract; but like several other arguments of equal importance they have been passed over in silence. If a desire for truth and free investigation is the ruling motive in this discussion, why are they not considered? Let the reader decide.

11. In conclusion, I would call the reader's attention to the fact that this controversy was entirely uninvited by any action on my part, and that all that has been said has been in self-defense. It is also noticeable that very little attempt has been made at refutation of the arguments that I have advanced, so that they still remain unanswered, while ridicule and sarcasm have been freely indulged in. The prospect being, then, that the discussion will degenerate into a mere personal altercation, or a mere play upon words, it cannot be desirable to protract it, since it could result in no good to any one concerned or interested. I still hold myself ready, however, for careful and candid investigation and consideration of this subject, and hope that as vegetarian reformers we may be able to settle the question upon such a basis as will not give those who are skeptical in regard to this movement any justifiable grounds for criticism and ridicule. J. H. K.

Tea a Narcotic Poison.

THIS is what the *London Lancet* says: "Tea, in anything beyond moderate quantities, is as distinctly a narcotic poison as is opium or alcohol. It is capable of ruining the digestion, of enfeebling and disordering the heart's action, and of generally shattering the nerves. And it must be remembered that not merely is it a question of narcotic excess, but the enormous quantity of hot water which the tea-bibbers successively take, is exceedingly prejudicial to digestion and nutrition. In short, without pretending to place this kind of evidence on a level as to general effect with those caused by alcoholic drinks, one may well insist that our teetotal reformers have overlooked, and even to a small extent encouraged, a form of animal indulgence which is as distinctly sensual, extravagant, and pernicious as any beer-swilling or gin-drinking in the world."

The Health Reformer.

Battle Creek, Mich., October, 1873.

Hygienic Medication.

THE hygienic system of medication is a system by which the sick are treated and cured solely by the aid of hygienic agents. A hygienic agent is an agent that is conducive to the preservation of health. It is proper to speak of hygienic agents, and of the system of hygienic medication; yet it would not be proper to speak of any substances as being hygienic medicines, for there are no hygienic medicines. All medicines, if they occasion what medical men call a medicinal effect, are poisons, and every such medicinal effect is a disease. Medicines can never contribute anything toward the preservation of health; and this fact is admitted by the leading physicians of every medical system. This being the case, how can they contribute anything toward restoring the sick to health.

It is evident that the art of preserving health consists solely in the use and application of those things that are conducive to health, and in the avoidance of those things which are conducive to disease. There are certain points on which all classes of physicians are agreed.

1. They all agree that poisons of every kind will, when introduced into the healthy human system, in sufficient quantity, occasion disease.

2. They all agree that the medicinal properties of all medicines are certain elements which are poisonous to the human system.

3. They all agree that for a man who is in perfect health to take poisons of any kind for the purpose of preserving health, would be the hight of folly, and that for him to continue the use of any of them would be the sure way to break down health.

4. They are also agreed as to what constitutes the hygienic or health-preserving agents, and that these consist of,

1. Pure air, taken into the lungs in large quantities so as to properly aerate and vivify the blood.

2. An abundance of sunlight to invigorate the nerves and tissues.

3. Pure, soft water to be used internally, as the sole beverage, and externally, as a cleansing agent.

4. Food of proper quantity and quality, taken at proper times, and in a proper manner.

5. Temperature of the proper degree at all times, in all parts of the body and limbs.

6. Clothing of proper material, and adjusted in a proper manner.

7. Exercise of the right kind and amount, taken at proper times.

8. Rest, taken at proper intervals.

9. Sleep, taken in proper amount, with regularity.

10. Regularity in all the habits of life.

11. Proper bodily positions.

12. Proper mental and social influences, in which cheerfulness and contentment shall be the marked features.

13. Proper moral influences, in which a sense of right, and a determination to do right in all things, shall be constantly manifested.

14. Agreeable and salutary external relations.

They are not only agreed that the proper use of all of these will preserve the health of those who possess it, but they are also agreed that the improper use, or misrelation of some or all of these, or the introduction of some poison into the human system, are almost the sole causes of all the diseases to which flesh is heir.

It is singular that medical men, or any other men or women who understand the above propositions, can think for one moment that the introduction of poisons into the systems of the sick can cure them. It is singular that they cannot see that the only safe way to treat the sick is to induce them to break off from all unhygienic habits, and to supply such conditions as exist in a state of health, which can only be done by supplying and applying the very agencies that preserve health.

In treating the sick hygienically, the practitioner pursues the following course:—

1. He suppies his patient with an abundance of pure air by removing from his room everything that will emit deleterious gases, and by securing thorough ventilation.

2. He makes the sick room cheerful by letting in the sunlight.

3. He allows his patient to drink freely of cool water, to allay his internal fever, and makes external application of water in such a manner as to keep the pores of the skin free and the circulation even.

4. He strives to keep the temperature at the standard of health, either by hot, warm, tepid, cool, or cold applications, or by adjusting the clothing properly, or by all of these means.

5. He is careful to see that his patient has the proper amount of wholesome food that is free from anything that can in any way injure him, and also to see that he partakes of this properly, and at proper times, and that he does not overeat.

6. As soon as the patient is able, he is directed to take exercise sufficient to promote healthy action, but not to produce fatigue.

7. The patient is directed to rest and sleep all he can, and to promote this, visitors are not allowed to see those who are weak and exhausted.

8. Great care is taken to see that all the bodily habits are regular. If the bowels do not move sufficiently often of their own accord, clysters of warm water are administered.

9. The patient is instructed to stand, sit, and lie in such a posture that all the vital organs are free to perform their functions.

10. A constant effort is made to divert the patient's mind from his disease, and to inspire him with hope and cheerfulness.

11. If his disease has been occasioned by wrong habits of life, there is an effort made to bring his moral propensities to bear on the matter by appealing to his sense of right, urging him to correct every wrong habit because of the moral principle involved therein.

12. A constant effort is also made to make the material surroundings such as would be the most conducive to the preservation of health were the patient not in a condition of disease.

Such, in brief, is hygienic medication.

M. G. K.

How a Scotch Girl Came to Like Oatmeal Pudding.

BY J. H. WAGGONER.

ONE of the conductors of the HEALTH REFORMER said it was a wonder that she did not naturally like it. And I think she did; at least she ate it from her early childhood. But there was a certain element in her nature, which is found in many of the American youth, whose kind-hearted mothers keep, for their gratification, a supply of bolted-flour bread, and make for them the plea: "My children do n't like graham—it do n't agree with them." This latter declaration may be true in some cases; I shall not obstinately dispute it. Yet with my present light, I must say the cases are so rare as not materially to interfere with the general truthfulness of a rule to the opposite. For, generally, the *disagreement* is on the other side. What I now relate is for the benefit of such, and I commend it to the consideration of kind-hearted mothers who profess to be health reformers.

I was once holding meetings in Ohio, in the neighborhood of a Bro. W., at whose house a number were dining. A mother, well meaning, no doubt, was providing some white bread for her boy, remarking that graham did not agree with him. The delicate question was referred to me whether this could be a fact, physiologically. Under such circumstances it seemed hazardous to give a direct answer, and I could only say that, with my knowledge of the comparative value and healthfulness of the two kinds of bread, I was satisfied that nature made a serious blunder when she got up a stomach better fitted for white bread than for graham. At this point, sister W. kindly came to my relief by relating an incident in her own experience. It was as follows:—

Her family, being Scotch, always had oatmeal pudding for breakfast. One morning she had a sullen fit, which showed itself in her refusal to eat her pudding, and she demanded other food. Her mother told her she could have other food when she had eaten her pudding—not before. But "oatmeal pudding did not agree with her" that morning, and she left the table, choosing, rather than to eat it, to go to school without her breakfast.

At noon, with a splendid appetite, she hurried home; and as the family always had other food for dinner, she had no fears of having a meal not to her liking. But on coming to the table, she found at her place the identical plate of pudding which she had refused in the morning! She plead for food like that which the others were eating, but in vain; her mother told her that she must first eat her oatmeal pudding. The pudding was cold, and not as agreeable to eat as it had been in the morning, and her indignation rose, even above her appetite. Again she left the table, and went to school without eating anything.

At night she hastened home nearly exhausted for want of food. She had no fears then; for she could not think her mother could see her suffer so any longer! But when she came to the table, there was her plate of oatmeal pudding, and, to her remonstrance, her mother firmly replied that she could have no other food until that was eaten. She was then convinced that her mother meant just what she said, and that nothing could turn her from her purpose. Of course, she "accepted the situation," and devoured her pudding, after which she was allowed to eat with the rest of the family. She never refused again to eat oatmeal pudding, and, which was of far more consequence, she never tried again, when in a moody frame, to control her mother.

This story was interesting to all present, except, perhaps, the good-natured mother and her self-willed boy. I have often had occasion to remember this when I have heard similar excuses made for the youth with whom hygienic diet "does not agree." And I have, in some instances, observed the course of these young fellows who "could not eat graham," and they are just the ones who, after a time, like tobacco and cigars. These articles agree with them wondrously. They suit their appetites, and agree with their stomachs, especially when a party of other reckless boys are with them. But if they had made half the effort to like graham that they made to like tobacco, they might now be both healthy and respectable. How many would eat graham if the first meal made them as sick as did the first chew of tobacco or the first cigar? Of all subjects, that of diet is the one on which people refuse to be guided by enlightened reason. If fond mothers felt as deeply over the *formation* of bad habits by their children, as they are caused to feel by the *indulgence* of these habits, or by their ultimate *fruits*, they would often save their children from ruin, and their own hearts from many a pang, and from bitter remorse.

THE aim of an honest man's life is not the happiness which serves only himself, but the virtue which is useful to others.

A Case of Dropsy.

DEAR DR. L.: After long silence, I take my pen to write you a few lines, that you may know how I get along. I often think about the time I spent at the Institute. What a pleasant way to be treated when sick, compared with the drug system. My health has been good ever since I left the Institute, and I have been getting stronger all the time. I have been able to do considerable hard work; have worked in the garden, and milked as many as eleven cows at a time. I would like to come and let you all see what a change there is in me. The bloating wore gradually away. I have had a good many letters from the patients who were there when I was. They all have the same story, how much benefit they received while there. My children often say how glad they are that I went to Battle Creek, as every one here that saw me, even the doctor, thought that I was dying. It is a year now since I left there. I never expected to have as good health as I have had.

I return my kind regards to all about the Institute. I hope I may not spend my strength in vain, but to honor God, the giver of every good and perfect gift. I remain, your friend,

M. W.

The writer of the above letter is a lady living in Ohio; mother of eight children. Hers was a bad case of encysted dropsy. Not receiving encouragement from her physicians that she would recover from her disease, she sought help at the Institute as her only hope. The following are some of her symptoms: Stomach deranged—at times palpitation of the heart—very much trouble about breathing—endured a good deal of distress in the back, and pain in the limbs—urine scanty and high colored—hands and feet cold—exceedingly restless and wakeful, had scarcely slept at all for three weeks when she came here. On examination, it was thought best to put the patient under treatment, to endeavor to arrest the effusion of the fluid, and to promote absorption, and so remove the accumulation of water, if possible, without a surgical operation. After a suitable lapse of time, her size and weight not diminishing, the tapping process was performed, and an ordinary sized pailful of water was drawn off. From this, she continued to improve, till her health was so much better that it was deemed safe, with proper care of herself at home, for her to return to her family, which she was very anxious to do. We are glad to hear of her good condition of health and favorable experience with hydropathy and hygiene, which restore health without leaving the person subject to a legion of drug or chronic diseases.

P. M. LAMSON, M. D.

Health Institute, Battle Creek, Mich.

ALL philosophy is only forcing the trade of happiness, when nature seems to deny the means.—*Goldsmith.*

What Hinders Health Reform?

BY R. F. COTTRELL.

THE obstacles in the way of health reform, the foes that are to be overcome, are not few nor easily disarmed and disposed of. Health reform, like other reforms, is up-hill work. We are a degenerate race. We have much need of reform; but those who need it most are the last to appreciate it. This is the great difficulty. The victim of a life-destroying habit is slow to realize the necessity of breaking from it. Still, many will concede the need and utility of the reform we advocate. It commends itself to the reason of all who will candidly look at it. What, then, hinders the speedy progress of the work?

Prominent among the obstacles to be overcome are the clamorous demands of perverted appetite. Stimulating articles of food, as well as stimulating drinks, have created an appetite that is not easily overcome. It is generally conceded that the drunkard is the victim of a perverted and unnatural appetite, which is goading him on to ruin. But is it not a fact that stimulating articles of food, such as flesh-meats and condiments in general, create an unnatural appetite for themselves, and not only for themselves but for other stimulants? If parents but knew it, in placing these rich and highly-seasoned viands upon their tables before their children, they are paving the way for them to a drunkard's grave; and it is almost a miracle of mercy if they do not follow that way to the bitter end.

But why are these stimulating things used upon our tables? Because they taste so good. How came they to taste so good? The taste has been perverted by use. The food that nature abundantly provides in grains, fruits, and vegetables, prepared in the most simple manner, much tastes better to the unperverted appetite than any or all these abominable mixtures can. And those who have acquired these false appetites can, if they will, overcome them, and learn to like better that which is good and healthful. But the judgment must be convinced, and a strong and persistent effort made; for perverted appetite is a foe not so easily dislodged from its stronghold.

The second foe to health reform which I will mention is habit. Habit, it is said, is second nature. The good housewife has acquired certain habits in preparing food for the table. These stereotyped habits are in the way. To drop them and learn to cook hygienically is thought to be an overwhelming task. The old way has been traveled so often that it still seems the easier and better way. This is false, but it will still seem so, the habit is so inwrought in the very being. The change is worth a thousand times the trouble it costs; but habit will not let them see it.

The third and last, though not the least, obsta-

cle to the reform which I design to name, is fashion. Oh! what will our friends and neighbors think, should we set so unfashionable a table? To live as God designed we should, would ruin us in the esteem of friends and fashionable society. Listen to their scoffs about starvation and "bran bread"! If they come to see us, we must convince them, by following their pernicious customs, that we are not starving ourselves to death. At least, out of courtesy to them, we must fix up some abominable thing that is not fit for any human stomach. This would be a good opportunity to demonstrate to our friends the beauties and benefits of the reform—to vindicate nature in providing for us the best and most nutritious food—proving that real health reformers are in no danger of starvation. And the force of this argument would be appreciated by the sensible. But the fashions of a foolish world stand in the way.

I have mentioned three obstacles which stand in the way of health reform. It will readily be seen that these are among the foes, if not the very chief, that stand in the way of the religion of the Bible. The world, the flesh, and Satanic pride, are foes to both. This proves that health reform is closely allied to pure and undefiled religion. Both wage a warfare against the same foes; and the success of each depends upon overcoming them. Truly there is more religion in hygienic cooking and eating than is generally imagined.

Power to Throw off Care.

FEW men had a greater number of cares resting upon them than Wesley. Being the center and source of authority to preachers and people, he was incessantly applied to for advice, help, and interference, both personally and by letter. Wherever he tarried, his lodgings were besieged with callers, like the office of a Minister of State. He had to listen to complaints, adjust differences, redress grievances, administer discipline, examine the financial and spiritual condition of his societies, counsel the embarrassed, comfort the sorrowful, encourage the desponding, strengthen the weak, and raise up the fallen. And all this daily, year after year, the number of his cases increasing as he grew older. What a mighty task! What a constant strain upon his attention, his patience, his nervous system! How could he endure it all?

Two causes operated in his favor. First, his mind was always calm, self-poised, and self-possessed. Nothing irritated him. He allowed nothing to chafe him. Said he, one day:—

"I feel and grieve; but, by the grace of God, I *fret* at nothing."

He possessed another self-preserving element in his power to cast care to the winds. He did not brood over his vexations and troubles. Said he, on one occasion:—

"Ten thousand cares, of various kinds, were no more weight nor burden to my mind than ten thousand hairs were to my head."

Such superiority as this is the attribute of a great mind. Inferior men, like overladen vessels, strain and fret themselves against the waves which beat around them; but Wesley, like a majestic steamship, moved calmly on through his countless duties and annoyances. The indwelling God and his native mental strength gave him the mastery. —*Household Treasure.*

Power of Comprehension.

THE following from *Hearth and Home* will be of interest to our readers as an illustration of the power of comprehension, and the effect of constant practice in developing any one mental faculty:—

It was said of Thoreau, we believe, that he could take up any given number of lead pencils without counting. A celebrated trapper once assured us that he could tell how many balls he had in his bullet-pouch by placing his hand on it, and without stopping to count them, and added; "I can tell the number of bullets instantly, without stopping, as you pronounce a word without spelling it." Southey was accustomed to take in the substance of a book in turning the leaves over continuously, glancing down the pages. Houdin, the magician, trained himself to quickness of perception, when a boy, by running past a shop window at full speed, and then trying to tell what was in it. We once saw a man on a canal boat who was amusing himself by going from passenger to passenger and telling almost every one where he had seen him before, on such a train, in such a hotel, in such a street, giving date and place to people with whom he had never exchanged a word. This training of the faculties in particular directions is carried to a marvelous extreme by backwoodsmen, trappers, and men who guess the weight of animals. Perhaps the most remarkable instances are the markers who leap from log to log at the mouth of a boom, standing on the log and translating instantly an old mark into a new one, remembering what equivalent to cut.—*Sel.*

BOYS, throw down your cigar, and resolutely say, "I will not idle away my time in smoking; I will not spend money to fasten on myself a foolish and filthy habit; I will not allow myself any indulgence which will deprive me of the confidence and respect of the best of men." Take this stand, and stick to it.

A '74er who eats tobacco, was somewhat relieved, when his lady friend told him that the Scriptures licensed him in it. He asked her to repeat the passage, and she said: "Let him that is filthy be filthy still." He is no longer filthy.—*Ex.*

Remarkable Surgical Case.

THE Waterbury (Conn.) *American* contains an account of successful surgery that is worthy of notice. It is the case of Miss Hattie Thomas, who more than a year ago, while in the employment of Edwin Smith, a manufacturer of buttons in Naugatuck, had her hair torn completely off her head from the nape of the neck to the forehead, including one eyebrow and a part of one ear, by being caught in a revolving shaft. The wound was worse than the scalping by an Indian, who merely cuts a circle of three or four inches diameter about the crown, and leaves his victim tonsured like a Roman Catholic monk or friar. Such cases of scalping are on record in which the loss of the natural head-covering was supplemented by an artificial toupee. But in this case, the exposure of the skull threatened death by exhaustion induced by suppuration. The *American* of that place says:—

At the time, it was supposed the victim of the horrid maiming could survive the shock but a short time, and if she recovered from the shock to her nervous system, her life would be but of short duration, as she could not long stand the agony of the pain from the wound, nor the drain upon her constitution by the suppuration that must inevitably take place.

Dr. S. G. Barrett, then of Naugatuck, but now residing in Waterbury, who was in almost constant attendance upon the sufferer, found that she was likely to rally from the first effects of the accident. He therefore determined to resort to the process of "skin grafting," discovered about three years ago by M. Reverdin, of Paris, as a means of saving the life of his patient. About six or seven weeks after the accident, when the wound had been brought into a healthy state by suppuration, the experiment was tried, the patient herself furnishing the first "seed skin" from her arm. The method of removing the skin required is simply to clasp the piece between the thumb and finger, raising it up, and clipping off with knife or scissors. The first attempt was a success, and greatly encouraged the doctor, who continued the experiment, still taking the "seed skin" from the arm of Miss Thomas, but the excessive discharge from the head wound, and the additional drain from the new wounds, necessitated by the removal of the skin, made it absolutely necessary that the doctor procure his supply of "seed skin" from other sources. Miss Gibson, her faithful nurse and particular friend before and after the accident, volunteered to furnish the next supply, and when the lady was exhausted, and the experiment continued to show every indication of success, the doctor mutilated his own arm for the benefit of his patient and the elucidation of science. And not the least noteworthy circumstance is that a number of the young lady friends of Miss Thomas came forward and volunteered to furnish, as far as they could, whatever new material was needed. Thus, the doctor, at various times, and from different persons, took sixty-four pieces of "seed skin," varying in size, the larger pieces being sufficient to cover a silver half-dollar. These large pieces were, in some instances, divided and subdivided, so that the number of separate pieces applied to the wound amounted to at least one hundred and fifty. These pieces of healthy skin, thus transplanted, would soon grow and extend from one piece to another, until, after the lapse of time, the pieces would join each other and shoot out until the margin of the wound was reached, and, in this manner, the head had become entirely covered with a new growth of skin. All kinds of wounds heal from the margin, and not from the center, and the growth from the old skin, in this case, all round from the back of the neck to the eyebrows, has been only about an inch. If this "grafting" or "transplanting" had not been resorted to, the wound would have remained a running sore and soon exhausted the life of the victim.

On examining the head, the action of nature can be seen in the development of new blood-vessels or veins, which branch out and unite with each other, the original "seed skin" forming no impediment to the growth of the veins. The development of veins and blood-vessels also indicates a healthy action of the skin.

It is doubtful if a case so remarkable is on record. If the experiment proves to be as successful as present indications promise, the skill of Dr. Bartlett will be as profitable to him as the recovery of his patient will be gratifying.

The Laugh on the Other Side.

AN article was published in a recent REFORMER relating how several doctors frightened a man into a severe sickness by simply telling him he was sick. This was an interesting, perhaps valuable experiment, and by no means so serious as the deceptions that are daily practiced upon credulous patients by the profession. But a man in Louisville, Ky., not long since tried another experiment of equal interest and value which brought the laugh on the other side? He took to his bed, put on a doleful look, and sent for five of the best physicians in succession, who each, in turn, made an examination of the case, and each differed materially from the others in the nature of the disease! Of course their prescriptions were a medley of contraries.

After receiving these, he rose from his bed, profoundly impressed with their ability and correctness of judgment in regard to disease and its treatment; and a single laugh served for five doctors together. J. H. W.

AN excuse is worse and more terrible than a lie: for an excuse is a lie guarded.—*Pope.*

Health and Disease.

BY W. PERKINS, M. D.

THERE is no one thing which causes so much pain, poverty, and distress, as bad living and bad doctoring. Trall and other learned philanthropists on both continents are now consenting that health reform is the basis of all reforms.

We must insist that physicians should begin to preserve health, rather than drug to restore it. Strange that so many have an idea that they can do the latter, but not the former. They can make one well, but cannot keep him so; reversing the common-sense maxim that "an ounce of prevention is worth a pound of cure." Strange that the skill which puts a body in order, might not prevent the disorder. Is it not easier to keep the road than to find it after losing it? Is it easier to reform than to keep from needing it? Is it wise to allow our children to contract vices, that we may use our skill to return them to their lost virtues? Is it not easier to keep ten men sober than to reform one drunkard? So must it be as to health, far easier and far safer for doctors to study, to practice, and to teach hygiene—to have all their patrons live in accordance with the laws of health—than to dose them into health when sick. Why not do as one of the kings in Europe —give the physician a certain sum for every day the family were kept in health, but nothing for the days this inestimable blessing was lost. Under such an engagement, the physician should have the control of the diet, and other sanitary regulations, which were far easier, happier, and less expensive than his too often vain efforts to kill diseases with poisonous drugs.

Besides, let it be well understood and never forgotten that disease is the remedial effort of nature to right a wrong; the noble defense against a vile attack; the courageous, loyal rally to dislodge a dangerous foe. For instance—put snuff into the nose, which will be the foe, and the sneeze which follows to expel it is the disease; put the same filthy weed into the mouth, and the saliva flows to wash it out, and if held in for the first time, nausea and vomiting follow as a re-inforcement to expel the enemy. Swallow indigestible food upon a weak stomach, and the disease of throwing it back comes as a relief. These instances, be assured, soundly illustrate the friendly action of our systems against all injuries. The cause of the disease is a foe, to be removed—the disease itself, a friend, never to be fought, but always favored.

Eight years ago, in the army, six of the writer's friends took the dysentery, five of whom were drugged—four into their graves, and one chronically, out of the service. The sixth was bathed, packed in wet sheets, and, instead of astringents, pure water was syringed into the lower bowel. In eight days this young man was well, and, indeed, washed and dieted much purer than ever before.

It is sincerely and honestly suggested whether the theory can be true, viz., that one disease can be cured by another. How can two wrongs make one right? When we get sick from impure air and diet, can we cleanse ourselves by yet impurer drugs? Where is the plain common sense that can believe that drugs which always sicken a well person can cure a sick one? In despite of such doses, nature may restore the patient; but never from their aid.

Dr. Franklin published, in his Poor Richard's Almanac, "God cures—the physician collects the fees."

Thomas Jefferson, and scores of other men of the best judgment, had no confidence in poisoning sick people well.

Medicine.

POSTED everywhere, on fences and bridges, on walls, and trees, and sign posts, advertised in newspapers, and handbills, and almanacs, you will see every sort of medicine, for all sorts of diseases, for man and for beast.

The man of medical science patents his compound according to the known rules of chemistry, and his nicely wrapped bottles stand side by side with the unscientific compound of the ignorant quack, who, among the multitude of patent medicine venders, stands out as prominent as any; for who cares to investigate the matter if the compound sells well!

The shelves of the country apothecary are adorned from the floor to the ceiling with long rows of popular medicines, wrapped in showy papers, or inclosed in tawdry colored boxes or bottles, and these are sold by the hundred, or dozen, or singly, to a credulous public, who really believe that wonderful life-giving properties exist in those bottles, and boxes, and wrappers.

We will no longer wonder at the stupidity of the ancient pagans, who worshiped at druidical altars, or at the Median schools, where the future was divined from the flight of birds, or at the Roman priest, who carefully ascertained the will of the gods from the entrails of the victims slain at the pagan altars. No; the credibility and stupidity of modern society in swallowing unknown compounds of poisons with firm faith, not in Vishnoo, not in Jupiter or Venus, but, oh! horribly lower idolatry, with firmer faith, in mixtures of the most poisonous of poisons. And mankind, old and young, and horses, and cattle, and sheep, and fowl, *all* must be dosed with these infernal, poisonous compounds. JOS. CLARKE.

IF you always live with those who are lame, you will yourself learn to limp. And this will apply to every vice and virtue known to humanity.

MINGLED FEELINGS.

We know not, on an April day,
How soon the sun may yield to showers;
The hawthorn bloom of closing May
Still hides the fading of its flowers.

We know not, in a smiling eye,
How soon the starting tear may tremble;
The heart where joy may seem to lie
Has oft most sorrows to dissemble.

We list to music that brings back
Dear musings of forgotten pleasure;
Yet meet with sorrow on the track,
Where memory floateth with the measure.

The pleasure of the human breast
Can never quite from pain be singled;
And that remembrance is the best
Wherein the least of griefs is mingled.

Down the broad vista life has passed;
When wearied memory seeks indulgence,
She ever finds *some* shadow cast
To cloud the sun's complete refulgence.

But, like a picture long laid by,
From which the garish hues have faded.
Few spots are all obscurity,
And most are only softly shaded.

—*Overland Monthly.*

A Day with a Courteous Mother.

DURING the whole of one of last summer's hottest days, I had the good fortune to be seated in a railway car, near a mother and four children, whose relations with each other were so beautiful that the pleasure of watching them was quite enough to make one forget the discomforts of the journey. It was plain that they were poor; their clothes were coarse and old, and had been made by inexperienced hands. The mother's bonnet alone would have been enough to have condemned the whole party on any of the world's thoroughfares. I remembered afterward, with shame, that I myself had smiled at the first sight of its antiquated ugliness; but her face was one which gave you a sense of rest to look upon—it was so earnest, tender, true, and strong. It had little comeliness of shape or color in it; it was thin and pale; she was not young; she had worked hard; she had been evidently much ill; but I have seen few faces which give me such pleasure. I think that she was the wife of a poor clergyman; and I think that clergyman must be one of the Lord's best watchmen of souls.

The children—two boys and two girls—were all under the age of twelve, and the youngest could not speak plainly. They had had a rare treat; they had been visiting the mountains, and they were talking over all the wonders they had seen, with a glow of enthusiastic delight which was to be envied. Only a word-for-word record would do justice to their conversation; no description could give any idea of it, so free, so pleasant, so genial, no interruptions, no contradictions, and the mother's part borne all the while with such equal interest and eagerness that no one not seeing her face would dream that she was any other than an elder sister. In the course of the day, there were many occasions when it was necessary for her to deny requests, and to ask services, especially from the oldest boy; but no young girl, anxious to please a lover, could have done either with a more tender courtesy. She had her reward; for no lover could have been more tender and manly than was this boy of twelve. Their lunch was simple and scanty; but it had the grace of a royal banquet. At the last, the mother produced, with much glee, three apples and an orange, of which the children had not known. All eyes fastened on the orange. It was evidently a great rarity. I watched to see if this test would bring out selfishness. There was a little silence; just the shade of a cloud. The mother said, "How shall I divide this? There is one for each of you; and I shall be best off for all, for I expect big tastes from each of you."

"Oh! give Annie the orange. Annie likes oranges," spoke out the oldest boy, with a sudden air of a conqueror, and at the same time taking the smallest and worst apple himself.

"Oh! yes; let Annie have the orange," echoed the second boy, nine years old.

"Yes, Annie may have the orange, because that is nicer than the apple, and she is a lady, and her brothers are gentlemen," said the mother quietly. Then there was a merry contest as to who should feed the mother with largest and most frequent mouthfuls; and so the feast went on. Then Annie pretended to want apple, and exchanged thin, golden strips of orange for bites out of the cheeks of Baldwins; and, as I sat watching her intently, she suddenly fancied she saw longing in my face, and sprang over to me, holding out a quarter of her orange, and saying, "Do n't you want a taste, too?" The mother smiled understandingly when I said, "No, I thank you, you dear, generous little girl. I do n't care about oranges."

At noon, we had a tedious interval of waiting at a dreary station. We sat for two hours on a narrow platform, which the sun had scorched till it smelled of heat. The oldest boy—the little lover—held the youngest child, and talked to her, while the tired mother closed her eyes and rested. Now and then he looked over at her and then back at the baby; and at last he said confidentially to me (for we had become fast friends by this time), "Is n't it funny, to think that I was ever so small as this baby? And papa says that then mamma was almost a little girl herself."

The two other children were toiling up and down the banks of the railroad track, picking ox-eyed daisies, buttercups and sorrel. They worked like beavers, and soon the bunches were almost too big for their little hands. Then they came running

to give them to their mother. "Oh! dear," thought I, "how that poor, tired woman will hate to open her eyes; and she can never take those great bunches of common, faded flowers, in addition to all her bundles and bags." I was mistaken. "Oh, thank you, my darlings! How kind you were! Poor, hot, tired little flowers, how thirsty they look! If they will only try and keep alive till we get home, we will make them very happy in some water; won't we? And you shall put one bunch by papa's plate and one by mine."

Sweet and happy, the weary and flushed little children stood looking up in her face while she talked, her heart thrilling with compassion for the drooping flowers and with delight in the giving of their gift. Then she took great trouble to get a string and tie up the flowers, and then the train came and we were whirling along again. Soon it grew dark, and little Annie's head nodded. Then I heard the mother say to the oldest boy, "Dear, are you too tired to let little Annie put her head on your shoulder and take a nap? We shall get her home in much better case to see papa if we can manage to give her a little sleep." How many boys of twelve years hear such words as these from tired, overburdened mothers?

Soon came the city, the final station, with its bustle and noise. I lingered to watch my happy family, hoping to see the father. "Why, papa is n't here!" exclaimed one disappointed little voice after another.

"Never mind," said the mother, with a still deeper disappointment in her own tone; "perhaps he had to go to see some poor body who is sick." In the hurry of picking up all the parcels, and the sleepy babies, the poor daisies and the buttercups were left forgotten in a corner of the rack. I wondered if the mother had not intended this. May I be forgiven for the injustice! A few minutes after I passed the little group, standing still just outside the station, and heard the mother say, "Oh! my darlings, I have forgotten your pretty bouquets. I am so sorry! I wonder if I could find them if I went back. Will you all stand still and not stir from this spot if I do?"

"Oh, mamma, do n't go, do n't go. We will get you some more. Do n't go," cried all the children.

"Here are your flowers, madam," said I. "I saw that you had forgotten them, and I took them as mementoes of you and your sweet children." She blushed and looked disconcerted. She was evidently unused to people, and shy with all but her children. However, she thanked me very sweetly, and said:

"I was very sorry about them. The children took such trouble to get them; and I think they will revive in water. They cannot be quite dead."

"They will *never* die!" said I with an emphasis which went from my heart to hers. Then all her shyness fled. She knew me; and we shook hands and smiled into each other's eyes with the smile of kindred as we parted.

As I followed on, I heard the two children who were walking behind, say to each other, "Would n't that have been too bad? Mamma liked them so much, and we never could have got so many all at once again."

"Yes, we could next summer," said the boy sturdily.

They are sure of their "next summer," I think, all six of those souls—children, and mother and father. They may never again gather so many ox-eyed daisies and buttercups "all at once." Perhaps some of the little hands have already picked their last flowers. Nevertheless, their summers are certain. To such souls as these, all trees, either here, or in God's larger country, are trees of life, with twelve manner of fruits and leaves for healing; and it is but little change from the summers here, whose suns burn and make weary, to the summers there on which "the Lamb is the light."

Heaven bless them all, wherever they are.—"*Bits of Talk*," *by H. H.*

Heroism Begins at Home.

We often hear people speak of a heroic action with a certain surprise at its performance not altogether complimentary to the performer. "He forgot himself," they say; "he surpassed himself;" "he was carried away by a noble impulse." This is not true. A man does not forget himself in emergency; he asserts himself, rather; that which is deepest and strongest in him breaks suddenly through the exterior of calm conventionalities, and for a moment you know his real value; you get a measure of his capacity. But this capacity is not created, as some say, by the emergency. No man can be carried farther by the demands of the moment than his common aspirations and sober purposes have prepared him to go. A brave man does not rise to the occasion; the occasion rises to him. His bravery was in him before—dormant, but alive; unknown perhaps to himself, for we are not apt to appreciate the slow, sure gains of convictions of duty steadily followed; of patient continuance in well-doing, of victories over self, until a sudden draft upon us shows what they have amounted to. We are like water-springs, whose pent-up streams rise with opportunity to the level of the fountain-head, and no higher. A man selfish at heart and in ordinary behavior cannot be unselfish when unselfishness would be rewarded openly. If he will not be unselfish when he ought, he cannot be so when he would. Is it not a question practicable for every home? What sort of characters are we, parents and children, forming by every-day habits of thought and action? Emergencies are but experimental tests of our strength

or weakness; and we shall bear them, not according to sudden resolves, but according to the quality of our daily living. The oak does not encounter more than two or three whirlwinds during its long life; but it lays up its solid strength through years of peace and sunshine, and when its hour of trial comes it is ready. The children of to-day, protected, cared for now, must soon begin to fight their own battles with the world—nay, more—must make the world in which they live. The future America lies in these little hands. They are

"Brought forth and reared in hours
Of change, alarm, surprise."

What shall we do to make them sufficient for the times upon which they have fallen?—"*Home and Society*," *Scribner's for June.*

Evenings at Home.

THERE is no breastwork against evil, and no school of virtue and moral worth like a good home. And the good home is not merely that which furnishes edible dinners, and well-kept rooms, and clean beds, but that which furnishes most satisfaction, refreshing, and joy to all its inmates. And evening is the only time when all the members of the family circle meet together, and mingle in happy and joyous intercourse. The occasion should be provided for as it usually is not. Our home-keepers should take the hint from those who furnish public entertainments, and lavish thought and ingenuity enough upon the occasion to make it so attractive, and delightful, and satisfying, that every member of the household will feel the happier for it, and look forward to its return with expectancy, and be beyond the reach of the ten thousand temptations to spend the evening hours elsewhere, except in the lodge-room.

Exactly how this is to be done must be answered by housekeepers for themselves. They have resources and ingenuity enough, if they but once see the importance of the thing, and set their wits at work to develop the hint into a beautiful and joyous reality.

We do not mean that everybody should spend every evening at home. Let there be times for profitable and entertaining going. Still it will be found that great public entertainments often excite more than they delight or edify, and if often indulged in, produce weariness, and a dissipation worse than fatigue. The evenings at home furnish the fitting alternate and contrasts to these public entertainments, and each is enjoyed the more for the other. And to make the evenings at home truly delightful, every resource of culture and pleasure may be rightly invoked. Why not import into the home circle some of what lies about, waiting for the invitation? And what one family cannot do alone, two or three together can easily effect. Were our people to spend a tenth part of the time and interest they now throw away on worthless excitement and utter frivolities, in making their homes truly helpful and happy, we should prevent half the crimes, and stop half the vices of society at their source.—*Sel.*

The Fatal Effects of Painting.

No one can ride or walk through the fashionable portion of New York city, attend any place of amusement, or go to any evening party, without becoming aware of the horrible fact that many women of whom better things might be expected, have fallen into the pernicious habit of applying to their skin the enamels which, under various attractive names, are advertised and sold in all parts of the land.

Not only faded faces, but countenances so young, plump, and pretty in outline that they must in their natural condition be attractive, are lacquered over with an unnatural polish of fine porcelain, which produces an effect such as one might imagine if a china doll were afflicted with the consumption.

This practice is as pernicious as it is is disgusting—the seeds of death or paralysis being hidden in every pot and jar of those mixtures, which are supposed to be not only innocent, but also to possess the virtues of the undiscovered fountain of perpetual youth.

Some who use them will suddenly have a severe illness; and receiving a private warning from the family physician, will cease the use of the cause of their disorder, and recovering, go through life with an extremely bad complexion as a reminder of their folly.

Others will drop suddenly, with their features twisted on one side, and perhaps deprived of the use of their limbs. Others will die outright, no one guessing why. The effect on any particular person cannot be calculated. What one suffers paralysis from, may kill another outright. The only safety is in having nothing to do with any of these baneful preparations.—*New York Ledger.*

ARTIFICIAL WANTS.—Bulwer says that poverty is only an idea, in nine cases out of ten. Some men with ten thousand dollars a year suffer more want of means than others with three hundred. The reason is, the richer man has artificial wants. His income is ten thousand, and he suffers enough from being dunned for unpaid debts to kill a sensitive man. A man who earns a dollar a day, and who does not run in debt, is the happier of the two. Very few people who have never been rich will believe this, but it is true. There are thousands and thousands with princely incomes who never know a moment's peace because they live above their means. There is really more happiness in the world among working people than among those who are called rich.

The Perils of Travel.

I HAVE been told that an Arab regards spitting in his presence as an insult, even if it be outside his tent. What, then, must an American lady think when she is passing over the railroads?

I had innocently taken my seat in a car, when, happening to make some movement, I was struck with horror by the discovery that my nice, new traveling dress was rapidly absorbing a narcotic pool. Of course, I started in dismay, catching up my traveling bag which I had place so carefully at my feet. If I did not at that moment look angry, I was a miracle of self-control, which you may believe if you can. I might, however, just as well have remained where I was, for in changing my place, I was destined to keep the pain. Not only did I find everywhere a similar pool, but I was in constant dread of fresh outlets.

Not a moment's cessation! A new relay of passengers brought no relief, for with the old as with the new—spit, spit, spit!—was still the sorry music to which my vexed spirit was forced to keep time, though I assure you I did not keep in time.

"Poor soul!" you will exclaim. "What a terrible shock to your romantic ideas, and what a thorough cure for them."

But I am not yet through. A change of cars made no improvement in my condition. Passing in, I observed a lady carefully holding up her dress, and looking warily from seat to seat. But it was all in vain. One might as well make a covenant with her eyes, and take the first seat that comes. The men chew and spit, they read and spit, they talk and spit, they breathe and spit, and some swear and spit.

Windows were open at the right and left, but they apparently considered it a sin to spit out of them, preferring to make use of the cars. Well, it *would* have been a pity to sully the fair face of nature; indeed, one might compassionate a country drenched in such narcotic showers.

By lamplight, as by daylight, the process went on. And what a scene did the flickering lights disclose! Men shaken equally out of their starch and out of their dignity, tumbling and rolling every way, some from, their horizontal position, spitting now more directly upon their neighbors. Women cuddled up on the seats, evidently ill at ease, and starting even in their slumbers, as well they might, amid these threatening showers.

Meantime the windows were all carefully shut. Three several times I took the liberty of opening mine to avoid suffocation, and three several times, when with unwearied pains I had wooed the coy goddess to my eyelids, did my neighbor close it. He might have been afraid of taking a cold; but I, of something far worse than a cold.

Now, is not this fashion an outrage against all propriety? Ought the ladies, and the few gentlemen of decent manners, to be doomed to sit thus in perpetual terror? Why, it is more dreadful than the sword of Damocles hanging over one's head.

And why, pray, should the convenience and comfort of one class be sacrificed to the disgusting filthiness of another? Notices are posted, forbidding gentlemen to *smoke* in the cars; but to spit —that is another thing! Were I a railroad director, I would have some cars labeled, "For the clean," and others, "For the unclean."—*Sel.*

Child-Murdering.

DR. MURRAY, of U. S. A., in a San Francisco medical journal, says of the "Mrs. W.'s pestilent Soothing Syrup":—

"I have ascertained that there are about one hundred thousand two-ounce bottles of it sold annually in this city, containing about one hundred and eighty thousand grains of morphia, which are given annually to the babies of this State.

"If the babies of California consume two hundred thousand ounces of soothing syrup, it is but fair to assume that there is seventy-five times that amount used in the whole United States, which would make 15,000,000 ounces of syrup, or about 14,000,000 grains of morphia. Setting aside the direct cost of this nostrum, it would be scarcely possible to estimate the damages which the people of the United States sustain indirectly from its use.

"How much the early resort of our youth to tobacco and alcohol stimulants is due to the previous use of the opium contained in this nostrum, is probably not realized. But that it has much to do with it any one can believe who has seen with what avidity the opium-eater, when deprived of his opium, will fly to alcohol, ether, hasheesh, tobacco, or anything that will lull the eternal craving of the appetite for something other than wholesome food.—*Sel.*

A Few Plain Truths.

A PRETTY large proportion of the whippings, scoldings, shakings, shuttings up, loss of holidays for imperfect recitations, and other similar tortures to which childhood is subjected, is owing to the injudicious and indiscriminate feeding everywhere so prevalent.

So, mother, before you punish your child for perversity and disobedience, this morning, just think of the mince-pie, doughnuts, cheese, etc., which you gave him for supper last night, and then sent him to bed because you had been bothered with him all day, and wanted a few moments of quiet before retiring yourself.

When you are wondering what makes your boy so restless, and discontented with the toys and

games you provide for him; wondering why he never can amuse himself, nor remain in one place "five minutes," just think of the pepper, and mustard, and "chow-chow," and other stimulating condiments wherewith you permit him to irritate his stomach, causing much of this feverish unrest so annoying to yourself and to others, besides preventing all healthy development in the victim of your folly and wickedness. I can call it by no softer name.

I cannot help wondering if a thorough knowledge of physical laws would not convince us that much of the evil in the world, which we are prone to attribute to a natural state of sin and depravity, is traceable to a temporarily disturbed, or permanently diseased, physical condition.

But it is toward the children that my warmest sympathies are elicited in this matter of diet; for they do not know where the danger lies, nor how to escape it if they did. And it pains my soul to see them made sick, and then drugged till some incurable malady is induced. That is the way of it.—*Sel.*

Engaging Manners.

THERE are a thousand pretty, engaging little ways which every person may put on without running the risk of being deemed affected or foppish. The sweet smile, the cordial bow, the inquiring glance, the graceful attention which is so captivating when united with self-possession—these will insure us the good regards of even a churl. Above all, there is a certain softness of manner which should be cultivated, and which, in either man or woman, adds a charm that almost entirely compensates for lack of beauty, and inestimably enhances the latter, if it does exist.

Worth While for Women to Know.

PEOPLE are content to understand very little of the conditions of comfort in houses. The question of health may be left to the care of the physicians, and that of beauty to the architect; but one would suppose, on matters of comfort, each one would look out for himself. There is excuse for this neglect in business men, who are hardly at home long enough to know whether a house is tenable or not; but it is strange that women will endure damp, foul odors, smoke and dust, year after year, without trying to remove the nuisances. The only idea most women have of suppressing any evil of the sort is to "send for a man to fix it." Workmen are not always to be had, and, if they are, they cost money, and a breach of comfort may last years before everything comes together for its mending. A woman needs both muscle and management to take care of a family, unless she can afford to pay a third of her income for these things in others. The clever woman is an actual acquaintance, who goes about her house spying a loose knob here and screwing it up, springing with her light plane to smooth down a door that sticks in the casing, fitting a neat strip to prevent a window's rattling, besides papering, painting, and varnishing with more nicety than one mechanic out of a dozen. Such a woman is worthy to be called a house-mother, after the good German word. How can a woman live, year after year, within four walls, and not grow fond of them, and seek to add to their comfort?—*Harper's Bazar.*

Care of Children at Night.

How many parents know that a child, with his warm, fresh, young blood, does not need the same clothing that a person of middle life must have? On a moderately warm night, the child is put to bed with a covering over him sufficient for a cool October night. Of course he throws it off, when he would lie quietly under lighter clothing. Then, when the mother looks in to see that all is right before retiring for the night, she pulls up the covering, and tucks it snugly in. How long is it before the little one has thrown it off and lies exposed to a chill from the falling temperature toward morning? About two or three o'clock in the morning there is frequently a very rapid fall in temperature, and if persons could form the habit of then rousing and providing additional covering for themselves and the children of whom they have the care, much sickness might often be saved.

ALARMING SYMPTOMS.—A very touching case of mental alienation in a charming young lady is described by a careful observer. Not long ago, her mother found her in her room energetically darning stockings, and soon after she appeared in the kitchen and assisted that wondering dame in making and baking bread and pastry. Alarmed by these fearful signs of mental disorder, her fond parents immediately sent for a skillful physician, who watched her through a keyhole while she sewed buttons on her father's garments, and mended those of her little brother. Much affected, the venerable man remarked that never, during a medical practice of twenty-five years, had he known any young person to manifest such symptoms as these. The most heart-rending phase of all, however, was shown the other day, when her kind father, with a faint hope of rousing her from her sad state, gave her $200, and told her to buy a new dress. Alas! 't was useless. She instantly observed that she did n't need a new dress, and if he would let her keep $25, to pay a widow's rent, she'd much rather he would take the money for himself. For a few moments that grief-stricken old gentleman gazed upon his hapless child, then, hiding his face, muttered between his sobs, "Her mind is gone! Her mind is gone!"

Perverted Self-sacrifice.

A LADY correspondent of the Philadelphia *Saturday Evening Post* puts an end to a good deal of cant in the following sensible letter :–

"Don't call me a hard-hearted heathen now, I beg you. Call me pet names, but don't call me that ; because I am sensitive, and it will hurt my feelings.

"But the fact is, I don't believe in self-denial to an unlimited extent. I don't believe it's Christian doctrine, in the first place ; and in the next place, it is the ruination of people to be sacrificed to, like an old heathen deity. As a general rule, things which sound well in poetry work most abominably in real life. I've noticed that. Wherever you observe that anything sounds particularly beautiful in poetry, you may set a peg down that it's something which won't work in practical life. For instance : From time immemorial, it has been a favorite amusement of poets and writers to harp upon the moldering string of the loveliness of a mother's devotion to her children, giving her life up to them, letting her whole existence be swallowed up in theirs, like the whale swallowing Jonah, as it were. It's a most pernicious and dangerous doctrine, worse than Darwinism ; yes, worse than woman's rights and cold water put together. Wherever a woman lets a gang of children swallow her up, like a very big whale swallowing a very little Jonah, just there she fails most miserably in her duty to herself and her children. I know it's a very fine thing to talk about how lovely it is for a mother to deny herself evening parties, good clothes, intellectual pursuits, and all that, to devote herself to her children—how altogether admirable it is for her to spend the energies of her life waiting on them, washing, dressing, decking them out in the most elaborate clothing her purse and fancy are equal to, and sending them off to Sunday-school, or a party, or somewhere, while she herself stays at home stitching or cooking for them, in a dingy old calico wrapper, with her hair in that horrid knot, like a baker's twist. Very beautiful is n't it ?

"' Yes, oh, yes ! '

"I tell you it is not beautiful at all. On the contrary, it is exceedingly silly. There is a well-known principle in mechanics that no labor is ever lost ; but it appears to me that this sort of overdone devotion of mothers to their children comes about as near being labor lost as anything well can be, not to violate a principle of physics. It is an injury both to mother and children, and an injury to other people, let me tell you. I knew one of these excessively devoted mothers. I have known several in my time ; and I think I never saw one yet whose children did not look down on her as a drudge, and nothing else. I never saw one whose children did not become selfish men and women, utterly regardless of the comfort and rights of other people, especially of their own families. But this mother was so devoted to her children that she arose in the morning and made the fires all over the house, and let her grown sons lie in bed till breakfast was ready, when she called them very tenderly, and when they came down stairs, she did not exactly wash their faces for them, but she had soap, water, and towels, all waiting for them, as though they had all been princes of the blood, and she a kitchen scullion. And she made herself a slave to them in everything else, just the same. They regarded their mother as a drudge born to wait upon them ; and by-and-by, when they had families, they regarded their wives and children in exactly the same light. They expect their wives to creep meekly about and drudge for them, just as their mother used to. If the household of one of them happens to be temporarily without a servant, his wife must arise first, make the fires, prepare the breakfast, and then gently awaken the lord and master of the premises.

"There is a golden mean to be observed in all things. Children ought to be brought up to wait upon themselves and other people, to have regard for the rights and the comfort of others. A stupid, affectionate drudge of a mother is about the last person on earth to train model republican citizens.

"There is nothing in this life more grand or heroic than to lose one's life in trying to save that of another. Moral grandeur can reach no sublimer hight than to give one's life to save another life. When it comes to be one's duty to die for others, one ought not to hesitate a moment. But that is something very different from one individual's being a slave to another while both are living. Such self-sacrifice amounts simply to committing suicide by inches without doing the other person any good. The longer I live, the more apparent it becomes to my mind that the Creator never intended one person to be born for a drudge to another. Self-sacrifice is a good thing till it reaches the point of engendering selfishness in the person sacrificed to, then it ought to stop."

GETTING WET.—When a person is wet he ought never to stand, but to continue moving till he arrives at a place where he may be suitably accommodated. He should strip off his wet clothes, to be changed for such as are dry, and have those parts of his body which have been wet, well rubbed with a dry cloth. The legs, shoulders, and arms, are generally the parts most exposed to wet; they should, therefore, be particularly attended to. It is almost incredible how so many diseases may be prevented by adopting this course. Catarrhs, inflammations, rheumatisms, diarrheas, fevers, and consumption, are the foremost among the train which frequently follow an accident of this kind.

Dandies.

LINCOLN said if he had a son who would part his hair behind, he would maul him to death with a squash, which he thought would be the only proper instrument of murder for so soft a thing; but if he had lived to see young men part their hair in the middle, his inventive brain would doubtless have thought of something still softer with which this class of young men could be exterminated. To see man—a creature designed to be grand, trying to make himself look like a life-sized doll. Oh! it is pitiful, to watch these automatic masculine dolls, dawdling when they walk, and twaddling when they talk. I wonder how people can have any doubt of Darwinism. My own opinion is, that these gentlemen are more recently descended from the *original* ancestry than the rest of humanity; in fact, that if so inclined, they could easily trace their line back to progenitors still more hairy than themselves, who did not wax their mustaches, or part their hair in the middle; progenitors who could have used their tails for handkerchiefs without putting "Night Blooming Cereus" on them—if they had set the least store by handkerchiefs. From boyhood to manhood there is a time when most young men take a disease which breaks out in plug hats, eye-glasses, gorgeous neck-ties and stunning shirt studs. It is as natural to a certain age as measles or whooping-cough are to childhood; it is the last effort that childhood makes to retain supremacy; the last disease to which boyhood is subject before manhood fairly sets in. During this period, the friends of the victim must be content to see him struggle about under a stovepipe tile, which threatens constantly to slip down and amputate his ears—and to devote most of his time and talents to a hopeless-looking mustache. These symptoms are trying to the young man's friends, and amusing to everybody else; but he should be tolerated with patience and endured with fortitude for a season—for unless the case is unusually violent and malignant, there is reason to hope that true manhood will outgrow foppishness; but if the disease has abated none of its fury by the time the young man is twenty-five, the case is hopeless; the sap in his head will never consolidate into brains; he will continue to part his hair in the middle, will live as a proof of Darwin's theory of the origin of man, and die a fop.—*Sel.*

THE surest way to poverty is to hoard up treasure. The surest way to wealth is to bestow liberally where it is most needed. The miser is the poorest man on earth; the most liberal soul is the most wealthy. If, therefore, you would be rich, do not aim at riches, but simply use what you already possess for the greatest possible good to the greatest possible number.

Our Homes.

THERE exists a very beautiful ideal of what home should be, but somehow men and women have fallen into the habit of showing the world their best side; of exerting themselves to be amiable and agreeable to people who care the least for them; while to those to whom their interest, honor, and happiness are of vital concern, they display all of their most unholy and disagreeable traits.

Some men use their homes as escape-valves for all the ill-humor generated by friction with the world. It will not do to storm and fume at that, but at home—ah, there one has a right to do as he has a mind to! It is his home, and he is bound to have his own way there, which he undoubtedly could—only there happens to be one or more others there intent upon the same thing. And, by the way, this "having one's own way" is a very difficult thing in a world like this, where every life is so linked with every other life.

There are women, too, set down in the calender of the world as patterns of amiability, whose home-temper is a sad commentary upon the wisdom of the world's judgment! There are softly modulated and lady-like voices, the charm of the social circle, which in the privacy of their houses break out in irritating taunts and angry retorts. There are "very nice women" who destroy all the sweetness and blessedness of their household by loud and continual scolding, frettings, and fault-findings. There are brothers who are chivalrous and devoted to other people's sisters, but who at home tease and trouble their own. There are charming young ladies, fancied by some infatuated young men to be angels, who are stubborn, self-willed, and indolent at home, where they should be most agreeable. The true meaning of home is not a place to go only when you feel hungry and cross; where you can wear your worst coat and your worst temper.

The home is undervalued, and its sweetness and sanctity highly desecrated; it should correspond with the beautiful ideal one, which we all venerate, where all baser passions are subdued and controlled by sweet affection, tenderness, and patience. It is where the wife prefers to stay above all other places; a place that is never lonely to her, for the innumerable blessings that hover around it; where the shadow of solitude is lightened by the halo of quiet love; where the hearth is always bright, and the rooms tidy and cheerful, and where the wife spends her "afternoons," and the husband his "evenings." These are the shrines to which the absent and weary will turn with longing for rest and peace.—*Sel.*

THE weak may be joked out of anything but their weakness.—*Madame de Stael.*

SCIENTIFIC.

Sound.

THERE is reason for supposing that persons whose ear is sensitive to very acute sounds are least able to hear very grave notes, and *vice versa*. Probably the hearing capacity of the human ear ranges over no more than twelve octaves. The gravest note audible to the human ear is supposed to represent about fifteen vibrations per second, and the sharpest, forty-eight thousand per second.

The auditory range of animals is doubtless very different from that of man; they hear sounds which are insensible to us, and *vice versa*. Many persons are insensible to the scream of the bat—it is too acute. But to the bat itself, that sound must be in all cases perfectly sensible. If, then, we suppose the bat to have an auditory range of twelve octaves, and its scream or cry to stand midway in that range, the animal would hear tones some six octaves higher than those audible to the human ear—two and a half million vibrations per second.

Scoresby and other arctic voyagers and whale-hunters have observed that whales have some means of communicating with one another at great distances. It is probable that the animals bellow in a tone too grave for the human ear, but quite within the range of the cetacean ear.—*Popular Science Monthly.*

Curious Manifestations of Electricity.

WHILE it is generally acknowledged that nothing at all is known of the real nature of the force which is called electricity, it is exceedingly interesting to notice the wondrous diversity of its manifestations. The following paragraph is from the pen of the editor of the *Boston Journal of Chemistry* for April, 1872:—

"During the extraordinary clear, cold weather which prevailed in February and March, the electrical phenomena observed in some houses excited much interest. In our own dwelling, for many days, no member of the family could walk across a room and come in contact with a metallic substance without receiving an electrical shock, accompanied with a spark and report. The door knobs, stop-cocks connected with steam radiators, gas-cocks, registers, etc., were so electrically spiteful that they were handled with caution. Our children amused themselves in the evening by lighting the gas with their fingers, and altogether the electrical condition of the atmosphere was quite unusual. In order that this exhibition of household electricity may be witnessed in perfection, it is necessary that the weather be clear and cold, and that the rooms be carpeted with heavy carpets, and these should be insulated by paper mattings beneath. Under these favorable conditions, a person scuffling or even walking across a room becomes so charged with electricity that he can ignite a gas-jet readily, by applying to it the tip of his finger."

Those who are employed in the running of machinery are familiar with another singular appearance which is especially noticeable in cold weather. A person standing beneath a large belt which is in rapid motion, will find his hair standing erect, while electric sparks may be seen passing from each individual hair to the belt, accompanied with a slight crackling sound. If the hand is held toward the belt, a stream of sparks may be seen passing from the ends of the fingers, if the room is not too light to render them visible, while a prickling sensation is felt in the hand.

Electric sparks may also be produced by rubbing the fur of a cat in the dark, passing the hand briskly along the body toward the head; similar sparks may be seen by a person who will comb his hair with a rubber comb before a mirror in a dark room. By drawing the comb quickly through the hair from the temples toward the back of the head, and then carefully bringing the teeth very close to the finger without allowing the comb to come in contact with any object, an electric spark will be seen to pass from each tooth to the finger, with a slight noise.

Spontaneous Combustion.

SPONTANEOUS combustion has doubtless been the cause of very many otherwise unaccountable conflagrations. It is a curious phenomenon, and one in regard to which many people are incredulous, notwithstanding that it is an established scientific fact.

Large heaps of cotton waste, when left undisturbed for a long time in a dry place, will frequently inflame, and thus occasion a destructive fire unless extinguished in season. Several fires in a neighboring city have originated in this way. In one case the fire was communicated from a pair of painter's overalls which had been carelessly thrown into a corner, after being used until they had become soaked with paint and oil.

A year or two ago a Detroit (Mich.) druggist made several experiments on spontaneous combustion. In one case he placed an old pair of painter's overalls in a chest, together with a quantity of shavings. He then placed the chest in a brick out-house. Upon examination, after a few days, he found nothing remaining but a quantity of ashes.

Another example of this remarkable phenomenon is seen in what is termed an "artificial volcano," the manner of making which is described by an old chemist. If a quantity of sulphur, chlorate of potash and iron filings be intimately mingled and then buried in the earth, after the lapse of a few days a most violent explosion will occur, exhibiting many of the phenomena of a true volcanic irruption.

These curious effects are the results of a peculiar property possessed by all minutely divided bodies or polished surfaces, of condensing oxygen, which is the active agent in all ordinary combustion. It is a fact well known to chemists that alcohol will inflame when poured upon a small quantity of platinum black. The heat of the body is also largely supported by a peculiar form of spontaneous combustion.

IT has recently been discovered that the "echo" in churches and public halls may be remedied by stretching several very small wires between the opposite walls, several feet below the ceiling.

Items for the Month.

To Our Patrons.

THE season of the year is now approaching in which a large portion of community pay more attention to reading than in all the rest of the year together. When the winter months arrive, the farmer has finished his most arduous duties, and has leisure, during the long evenings, to sit down with his family about a cheerful fire, and investigate those subjects which are of vital interest to him and them. The same might also be said of a large class of mechanics. How important, then, that, during the limited time which these individuals spend in this manner, they should be provided with the very best kind of reading material. Being eminently practical in its nature, the REFORMER is just adapted to meet the wants of this class of people.

The Publishers of the REFORMER aim to make it such a journal as will be sure of a hearty welcome each month as it goes to its thousands of patrons. They have no mercenary end in view in its publication; hence the liberal terms at which it is offered. Their only object is the benefaction of the race. This being the case, we feel no hesitation in urgently requesting all of our patrons who feel any interest in the glorious cause of health reform, and who appreciate our efforts for its advancement, to assist us in the work of disseminating the truth upon this subject by aiding us in increasing the circulation of this journal. Show the REFORMER to your neighbors; and if you are pleased with it yourselves, recommend it to your friends, and, if possible, induce them to become subscribers. Have you received benefit from heeding the teachings of the REFORMER? Then let your friends know it. If they are too incredulous to subscribe, send it to them yourself for a year. The expense is only a trifle, and you save, every month, as the result of following its teachings, enough to supply it to a dozen of your friends for a year. And now see what an inducement we offer you to be benevolent:—

A MAGNIFICENT OFFER!

Is it not a magnificent offer when we propose to furnish the REFORMER one year for 50 cents to all those individuals who desire to send it to their friends? We will also furnish it to societies for gratuitous distribution at the same rate. This is selling a well-printed magazine of 32 pp. for 4 cts. per copy! only a few mills more than the cost of the white paper. Who cannot afford to be generous under such circumstances? How many care enough for the health and happiness of their friends to invest less than they have scores of times more than wasted for a half pound of tea or tobacco?

Another Inducement!

THOSE who subscribe immediately for the next volume will receive the two remaining numbers of this, gratis; or fourteen numbers for $1.00. For this small sum you will get 448 large pages of excellent reading matter, as none of our pages are devoted to advertisements. Now is the time to subscribe. Send name and address for specimen copies.

Premiums!

As an inducement for agents to canvass for us we offer to allow a percentage of twenty-five cts. cash, or 50 cts. worth of health publications, for every subscriber obtained. Agents who wish the cash premium can retain it, and send the remaining 75 cts., which will entitle the subscriber to the REFORMER for one year. If health publications are desired, the full amount should be sent, with directions as to the kind of books wanted, etc., and 50 cts. worth for each subscriber obtained will be immediately forwarded. As will be seen by the Book List, several new works have been recently issued, which may be thus easily obtained.

Here is an opportunity for every person who wishes to do so to render valuable service to his fellow-men, at the same time that he is benefiting himself. Who will avail themselves of this opportunity?

Those wishing to act as agents would do well to address us immediately to that effect, and send for specimen numbers of the REFORMER, which will be sent free.

We want to receive the names of at least 5,000 new subscribers before the first of January, 1874; why may we not?

What our Exchanges Say.

SAYS the *Chicago Evening Journal* of Sept. 20, in speaking of the REFORMER:—

"As an instructor of the people in correct habits of living, and a healing art founded on true science and common sense, it ranks as a first-class periodical."

Says the *Toledo Democrat*:—

"We give it as our professional opinion that the REFORMER is one of the best sanitary journals published. It should be found in every family."

The *Household Treasure* says:—

"The department 'To Correspondents' is worth the price of the journal in any family."

The *Biblical Messenger* remarks:—"The reading matter of this journal is very interesting and profitable to all grades of society; it is worthy of a wide circulation."

The *True Woman* pronounces the REFORMER to be "one of the most readable of the journals devoted to the preservation of health and the treatment of disease."

Many other excellent journals speak of us in equally flattering terms, but we will not quote further.

CORRECTION.—Two quite serious errors occurred last month in the article on "Alcholic Medication." On page 263, first column, thirty-third line from top, instead of "debilitated conditions" read "debilitated constitutions." In second column of same page, eleventh line from bottom, read latter for former. The printer is responsible for the first error, but "followed copy" in the second case.